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# THE JOURNAL

OF

## MENTAL SCIENCE

Published by Authority of the  
Association of Medical Officers of Asylums and Hospitals  
for the Insane.

EDITED BY

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AND

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"*Nos vero intellectum longius à rebus non abstrahimus quam ut rerum imagines et radii (ut in sensu sit) coire possint.*"

FRANCIS BACON. *Proleg. Instaurat. Mag.*

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VOL. XI.

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MDCCLXVI.

' IN adopting our title of the *Journal of Mental Science*, published by authority of the Association of Medical Officers of Asylums and Hospitals for the Insane, we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane. But it has been objected that the term mental science is inapplicable, and that the terms, mental physiology, or mental pathology, or psychology, or psychiatry (a term much affected by our German brethren), would have been more correct and appropriate; and that, moreover, we do not deal in mental science, which is properly the sphere of the aspiring metaphysical intellect. If mental science is strictly synonymous with metaphysics, these objections are certainly valid, for although we do not eschew metaphysical discussion, the aim of this Journal is certainly bent upon more attainable objects than the pursuit of those recondite inquiries which have occupied the most ambitious intellects from the time of Plato to the present, with so much labour and so little result. But while we admit that metaphysics may be called one department of mental science, we maintain that mental physiology and mental pathology are also mental science under a different aspect. While metaphysics may be called speculative mental science, mental physiology and pathology, with their vast range of inquiry into insanity, education, crime, and all things which tend to preserve mental health, or to produce mental disease, are not less questions of mental science in its practical, that is, in its sociological, point of view. If it were not unjust to high mathematics to compare it in any way with abstruse metaphysics, it would illustrate our meaning to say, that our practical mental science would fairly bear the same relation to the mental science of the metaphysicians as applied mathematics bears to the pure science. In both instances the aim of the pure science is the attainment of abstract truth; its utility, however, frequently going no further than to serve as a gymnasium for the intellect. In both instances the mixed science aims at, and, to a certain extent, attains, immediate practical results of the greatest utility to the welfare of mankind; we therefore maintain that our Journal is not inaptly called the *Journal of Mental Science*, although the science may only attempt to deal with sociological and medical inquiries, relating either to the preservation of the health of the mind or to the amelioration or cure of its diseases; and although not soaring to the height of abstruse metaphysics, we only aim at such metaphysical knowledge as may be available to our purposes, as the mechanician uses the formulae of mathematics. This is our view of the kind of mental science which physicians engaged in the grave responsibility of caring for the mental health of their fellow-men may, in all modesty, pretend to cultivate; and while we cannot doubt that all additions to our certain knowledge in the speculative department of the science will be great gain, the necessities of duty and of danger must ever compel us to pursue that knowledge which is to be obtained in the practical departments of science, with the earnestness of real workmen. The captain of a ship would be none the worse for being well acquainted with the higher branches of astronomical science, but it is the practical part of that science as it is applicable to navigation which he is compelled to study."

J. C. BUCKNILL.

THE JOURNAL OF MENTAL SCIENCE, APRIL, 1865.

[Published by authority of the Association of Medical Officers of Asylums and Hospitals for the Insane.]

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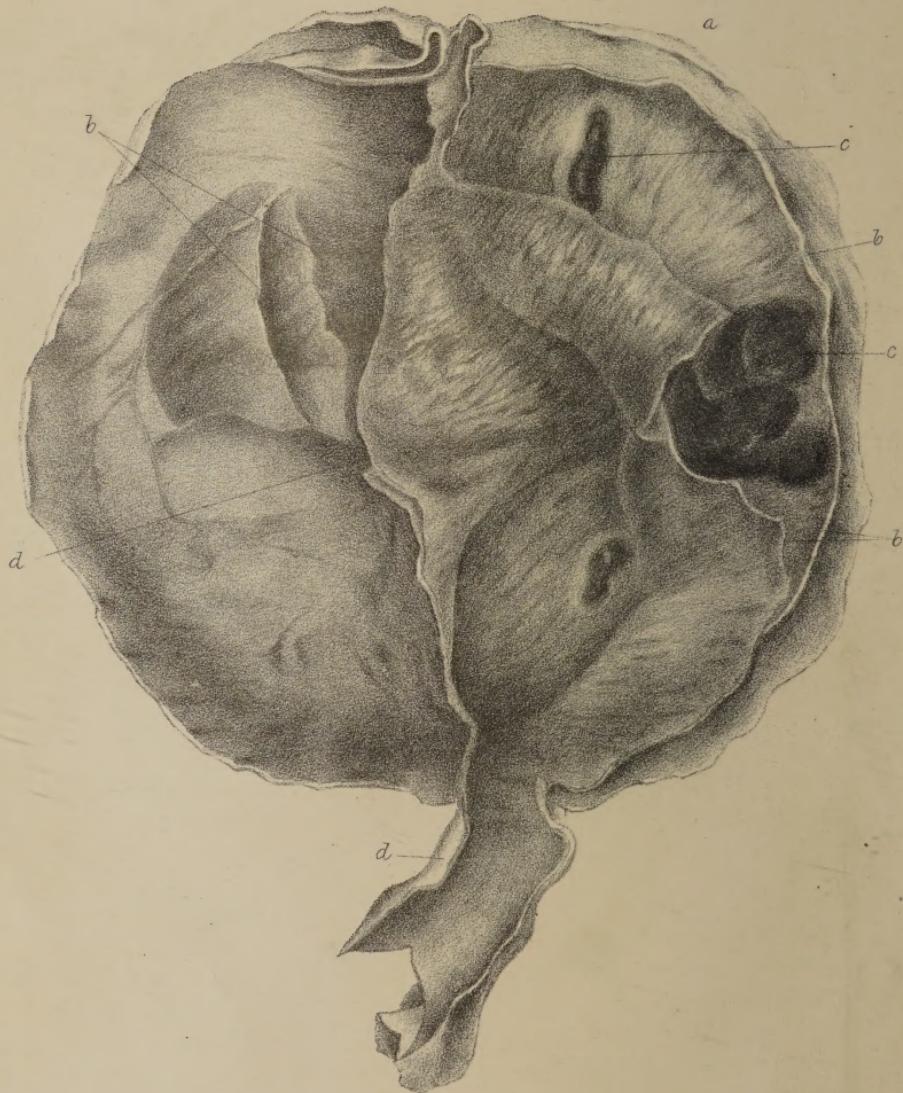
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To illustrate Dr J.W. Ogle's Clinical Case:  
Journal of Mental Science, January 1865.





# THE JOURNAL OF MENTAL SCIENCE.

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VOL. XI.

## PART I.—ORIGINAL ARTICLES.

### *The Psychology of Idiocy.*

“L’homme en démence est privé des biens dont il jouissait autrefois ; c’est un riche devenu pauvre : l’idiot a toujours été dans l’infortune et la misère.”

ESQUIROL.

THERE are two methods by which an approximate analysis of the elements or constituents and of the laws of Mind may be arrived at. They may be submitted to examination in the mind itself ; or they may be inferred from character, conduct, or individual acts. In both processes there are sources of error, and limitations. When subjectively considered, the nature and the accuracy of the result depend upon the original capacities to observe, abstract, report ; upon those as affected by education, physical health and external circumstances, and upon the influence of preconceived opinions in estimating mental phenomena.

When conclusions are drawn from observation, the same sources of fallacy obtrude ; with the additional and fertile tendency to elect ourselves, or some equally imperfect and ill-regulated intelligence, or some erroneous abstraction, as the standard by which mental and moral qualities and combinations are estimated in others. It is obvious that, in pursuing such a course, all speculation must be confined to what is developed in act ; and that, after the most exhaustive analysis within our power, there may remain a residuum of latent or undeveloped faculties and feelings in which, rather than in the prominent and palpable features, the essential attributes, and the true individualism of the mind may reside.

In the case of the idiot, we are shut out fatally and for ever from obtaining data subjectively. It is sufficiently difficult and fraught with danger for the philosopher to formulise general laws from his

own experience of the structure and working of minds constituted like his own, of equal or greater strength and comprehensiveness ; it is impossible for him to pass into the new and barren and chaotic region of idiocy, and it is equally impossible that the idiot should turn analyst, lay bare his own nakedness and destitution, and reveal what his fragmentary thoughts are, how originating, how associated and how regulated. The obstacles in the former case do not consist merely in the impotency of the robust and mature mind to enter into the consciousness and conceptions of the infantile and feeble, and to argue from premises which differ in degree only from those with which he is familiar, but in that the idiotic mind differs in nature from that of healthy and normal men ; that much of it is beyond investigation, and that it lies within the limits of disease. Seguin, in the few pages which he has devoted to this matter, says epigrammatically “Idiocy is an intellect badly served by imperfect organs.” But the truth is, that the organisation appears to interfere not only with the operation but with the display and the discovery of such capacities as may exist, and that there is opposed to all investigation of what weakmindedness actually is the double barrier of disordered intellect, manifested through, or in relation to, imperfect organisation.

There may be a psychical life hidden deep beneath the surface which we see, beneath those superficial manifestations which render the idiot what he is in our eyes. It is certainly known that great constitutional changes in this class—grave diseases, involving directly or indirectly the nutrition or stimulation of the nervous centres—exquisite pain—appear to wake up and call forth powers hitherto unknown and unemployed ; and that training imparts a growth and width, and develops peculiarities and proclivities which impart a new aspect to the still limited intelligence. The mind of Novalis was apparently created or roused into activity by a severe illness, in his ninth year ; and it must, moreover, be admitted that certain ultimate facts and conclusions are occasionally encountered in the idiotic where there is apparently an absence of the means, an incapacity to conduct the process by which they are reached, or by which they are reached in our minds ; that the Not-me, for instance, is comprehended, as well as the life and some of the moral relations which it includes, through the agency of touch alone ; that the power of abstraction exists without any clear notion of the concrete. This is, however, partly explicable on the ground that where certain qualities are apparently eliminated, there is actually an inability to perceive them. It does not, for example, follow that because idiots have the sense of vision they possess it in the same degree or perfection as those of sane mind. The range may be limited, imperfect ; one class of impressions may be received, and not another. Howe recounts cases where there was no perception of musical sounds ; and while many display a morbid sensibility to particular colours, red for example, others are

unable to distinguish one colour from another, blue from green; a smaller number are insensible to colours altogether. In such an inquiry, dogmatic generalisation would be most unwise; for not only are there various degrees and categories of feeble intelligence, minds destitute of certain powers, defective in others, and disturbed by savage animalism, to be dealt with; but idiots, as a class, include every form of mental weakness and impoverishment, whether depending upon physical or moral causes, whether commencing during or subsequent to uterine life, upon inadequate nutrition, or the privation of that stimulus which training imparts.

From whatever source arising, we would compare the condition of the healthy idiot to that of the chronic lunatic who has survived a severe disease involving structural deterioration, but compatible with life and with the exercise of many original powers, whose system has become reconciled to the mutilation inflicted, whose intellect and feelings act faithfully within the range of the faculties conserved, and in accordance with the known laws of healthy mind, so far as these are unimpaired; who is susceptible of training and culture and of the acquisition of new habits and knowledge, and may attain that limit prescribed by his organisation—a limit which is occasionally the narrow boundary line between unsoundness and intellectual manhood. Idiocy may be said to stand in the same relation to certain intra uterine states, to the accidents of lactation, dentition, and of the years previous to puberty, that dementia does to mania, epilepsy, &c. It might legitimately be called infantile dementia. The conditions which are followed by idiocy are, necessarily, not so easily determined as the antecedents of fatuity in the adult; but we know that it is apparently produced by the effects of violent passions and emotions, anger or fear, but especially the latter, in the mother; by physical injuries actually affecting the organs of gestation, or involving the nervous system; and by such a course of conduct on the part of the parents, intemperance, immorality, the contraction of syphilis, &c., as would induce dementia in the individual. We know further that cerebritis, strumous affections of the meninges, convulsive attacks, are the most frequent phenomena of every mental impairment, and these are the most frequent complications and terminations of idiocy.

In place of a mere arrestment of development, it is observed to be a sequela of some acute disease or form of degeneracy—struma, rickets, &c.; the result, in fact, not of interrupted growth, but of disorganisation. The idiot is not merely a mental and moral dwarf. His mind is not a microcosm, in which the different faculties and potentialities of the mature and perfect man may be found, differing only in strength, proportions, or scope, from the ordinary intellect, and harmonised and well balanced amongst themselves, and acting to the extent of their grasp and cultivation upon trivial or child-like

matters; but it is a chaos, a ruin; stunted, distorted, degraded. This disease runs its course throughout a life-time, which is, however, of short and well-ascertained duration, and so constantly terminating in the same way by the same destructive agencies, that these may be predicated from the beginning.

Microcephalics, epileptics, choreaics, paralytics, maniacs, dementes, backward, starved, strumous, poorhouse, perverse children are, unfortunately, grouped confusedly together; as if the common misfortune of gnarled mental proportions justified such a classification. There are many reasons, dictated by humanity as well as by philosophy, for viewing and treating the members of this discordant fraternity separately. That which chiefly concerns the present object is the consideration that, in regarding these classes as a whole, an effort is made to apply the same analysis to the diminutive but comparatively healthy mind of the genuine congenital idiot, and to the degeneration and wreck entailed by acute disease, and to the depravity engendered by original disposition, by vicious education, or by the lack of all education.

Esquirol attempted to found a psychological classification upon the power of language, or of using oral signs for mental impressions.

|                         |   |
|-------------------------|---|
| 1st degree. Imbecility. | Speech free and facile.                     |
| 2nd.     ,     ,        | Speech less easy. Vocabulary circumscribed. |
| 1st degree. Idiocy.     | Single words or short phrases used.         |
| 2nd.     ,     ,        | Monosyllables only articulated and cries.   |
| 3rd.     ,     ,        | Neither phrases nor monosyllables used.     |

So far as this arrangement embodies the gradations in the power to articulate, it is based on experience; but it cannot be received as an index of the general mental powers possessed by the members of the series, nor even of any intellectual power connected with utterance, except imitation; for the mute idiot is not necessarily at the bottom of the scale, nor the loquacious idiot at the top; as the former may display many mental manifestations, and the latter may repeat sentences, songs, psalms, without attaching the slightest significance to them.

Bucknill and Tuke suggested what may be styled a physiological classification. First, those idiots who exhibit nothing beyond the reflex movements known as excito motor.

Secondly, those whose reflex acts are consensual or sensori-motor, including those of an ideo-motor and emotional character.

Thirdly, those who manifest volition, whose ideas produce some intellectual operations and consequent will.

These views are in harmony with popular opinion, and are certainly not open to any objections from physiologists. But, having the object of this paper in view, two observations occur. "Sense-

less, motionless" beings are heard of; but a viable idiot, deprived of all the external senses, must be of exceedingly rare occurrence. We have not encountered such. It is almost impossible to determine what movements of the idiot are ideo-motor, and what are voluntary. Various considerations lead to the opinion that not merely reflex and sensory, but impressions derived from coenesthesia, or the molecular and other changes in the viscera, are included within the consciousness of the idiots of low type.

We have placed all idiots under five categories, as they are one, two, three, four, and five sensed; but such a system, while it embraces and, to a certain extent, fairly measures the inlets to impressions and the means of building up the intelligence, leaves untouched the original capacities to receive, assort, apply, whatever these may prove to be. At present, at least, it may be prudent to dismiss these essays, and to consider the mental phenomena of idiocy as those of a group of bodily diseases, without reference to the species or modifications under which the malady may be presented. We shall, in the mean time, accept that involuntary or accidental training to which all idiots, the most debased and neglected, as well as the most elevated and most tenderly cherished, are subjected, who can see the blue sky, or smell flowers, or hear sounds, or even where the external senses are closed to such impressions, where pain or muscular motion or other internal impressions affect the nervous system, not only as an augury, but as a demonstration that the inner life may be reached and added to, and to a certain degree placed in relation to something outside and above itself; and that it is regulated by the ordinary laws of mind, especially mind when labouring under disease.

The exposition of Bain, the most physiological of our metaphysicians, of the growth of mind and experience in the newly born lamb, "whose eyes were wide open, and light must have entered to stimulate the brain," appears an illustration of a process that must take place in a large majority of the most rudimentary members of our race. An idiot first gazes at the sun, or at a single ray of light, which, designedly or accidentally, falls upon his eye. He turns towards it, he extends a hand towards an illuminated spot, or to a particular colour, and always towards the same colour. In such a succession of objective manifestations, there is a gradual broadening of knowledge, of that basis upon which the higher acts of consciousness are founded. The first recognition of an external world may in an idiot, as well as in another, include all subsequent mental processes. And it is quite clear that in the more simple or limited capacities, the cognition that there is something without, must be a single impression of sight, or taste, or touch, as the case may be; and of single impressions of the same sense, which cannot be compared with past or existing perceptions, as there are

none such ; which must be received ; which must be retained ; which, on the transmission of a second impression from the same source, must be found, by some pre-existing mental condition, and not by itself, to possess qualities of similarity, or dissimilarity, to that impression by which it is displaced ; must be combined or separated, but must be different from the acts by which it is received, combined, separated, which is a contribution to mind, but, until the impression is received, is not mind itself. These propositions imply a receptivity, or a capacity to receive, retain, combine, apart altogether from the impressions passing towards and into it. It appears, however, that there are human beings who, whether endowed with this capacity, or not, give no response to light or sound, or vapour, or odour ; so that, although the stimulus of which Mr. Bain speaks reaches, and is, in all probability, followed by those molecular changes in the brain which accompany mentalisation, no external proof exists that thought or feeling arises ; a proof, wanting, perhaps, in consequence of the vices of that organisation by means of which it should be demonstrated. This irresponsible capacity may, however, be fostered by reports from internal organs, which, like reflex actions, appear to be more pronounced and distinct where the operation of the external senses is withdrawn or restricted. It must not be forgotten that the blind, denied all materials from the ordinary and natural channel, form visual images and create pictures.

Idiots generally display great accuracy and delicacy in the exercise of touch. They examine and identify objects by it. They derive exquisite gratification from passing their fingers or lips along smooth, or soft, or warm surfaces, although, to some, the sensation imparted by wool or velvet acts like galvanism. In certain spots the sense is exalted, and they manifest emotions by what may be designated rhythmical palpation. But many are met with, deprived not merely of all tactile power, and of the instruction and delight which it opens up, but of common sensibility. They bear children, they suffer from mortal ailments, severe and painful injuries, apparently ignorant of all that is passing. They tear, bite, and mutilate different parts of the body, unconscious of the evil inflicted. One penetrated his cheek, and then forced his finger through the commissure of the lips ; we have known two who amputated the organs of generation, and treated the emasculation as a joke ; and have seen one within a short space who had lost several toes and a part of a foot by exposure to cold and gangrene, without much disturbance to the system, and with a total disregard to the wounds.\* While

\* This anaesthesia or obtuseness observed in many is a barrier to training. It interposes between the stimulus of pain as well as of pleasure, and consciousness as factors of cerebral excitement and thought. It may predispose to subjectivity ; it certainly diminishes greatly the multitude of slight impulses by which the activity of intercourse with the external world is sustained.

due importance is attached to general and local anaesthesia, it is certain that these revolting accidents are in many instances to be traced to those morbid tendencies, degraded appetite, and thirst for blood, which produce similar manifestations in the insane; and that apathy which accompanies concentration.

There are individuals who never suck, and who never swallow, unless the food be placed in the pharynx; a condition which assimilates the scope of the nervous system to that of the lower animals. But, in general, taste co-exists with the lowest forms of human organisation. The experience derived from the palate constitutes the only intercourse with the external world, the only obviously appreciable source of knowledge and happiness. But even within this narrow limit there are detectable the comparison of one sensation with another, a choice, a preference, and joy or anger as that preference may be indulged. Food is accepted. Castor-oil, or such condiments as nauseate or irritate, are rejected. Here psychical existence must be summed up, so far as it can be derived from external intimations, in one sensation, or in the difference between impressions on the same sense. It is difficult to realise the mental condition which is confined to savours. Were it not for the manifestations which grow up around the mere act of sensation; were there not an election, signs of pleasure or repugnance, and, where muscular power exists, the closure of the teeth or lips, in order to exclude the offensive morsel; many of the phenomena might be regarded as beyond the range of cognition. Such an amount of limitation and privation would unquestionably justify the appellation of solitary to this class of beings. They are imprisoned in a narrow perpetual egoism. Even their notion of self cannot pass beyond an agreeable taste. Their notion of time must rest on the difference between the moments when the palate is titillated, and when it is not. And yet analysis would show, among these fragments of mentalisation, the rudiments of the processes upon which man depends for his moral power and dominion. They compare, they remember, they reject, they resist, and, in some cases, exhibit a desire to escape from the thraldom to which they are condemned. We have recently watched a deaf and blind idiot, incessantly pawing the air as if to find the external world of which he has obtained some faint conception, and resting quiet and tranquil whenever he can grasp the hand of a living being.

Under such circumstances, personal identity if it exists even in embryo, and we must hold it to exist, must reside in a single act of perception, or in a series of single impressions of the same nature, differing, it may be, in force or distinctness; and yet our faintest experience of the "*me*" seems to depend upon the comparison of two or more different impressions—that which is identified with ourselves, and that which is not ourselves, which has reached con-

sciousness through a different channel. To regard personal identity as the sense of co-existence, or the impression made on consciousness by all the vital processes, does not solve the difficulty, as such a view supposes the pre-existence of consciousness, into, or before which, all intimations from internal organs must pass. If the sense of personal identity can be, or can arise as, an element of one class of perceptions, taste for example, it may be inferred that such sense will gain extension and clearness in proportion as such perceptions are multiplied. The case of Laura Bridgeman—celebrated alike for the extent of her privations and for the triumph effected in her education over physical impediments which reduced her nearly to the class of children now under consideration—may serve to illustrate these positions. When about twenty months old, and then a healthy and robust but epileptic child, she was attacked by a severe and protracted illness, characterised by fever, by suppuration and disorganisation of eyes, ears, and surrounding structures, and which left her debilitated, deaf, blind, with the sense of smell almost destroyed, and that of taste blunted. This one-sensed child was limited for life to such information as she could obtain by touch. The history of the gradual evolution of her powers does not fail to be recorded here, although the course pursued was similar to the most approved methods of reaching the idiotic mind; but it yields several important suggestions connected with the present inquiry. She was not congenitally an idiot; her nervous system, in whatever way affected by epilepsy, was not structurally defective, or incapable of performing its natural functions; and, accordingly, it is recorded that at her second birth, “among her first efforts after her recovery, was to explore the room and house, to familiarise herself with the form, tensility, weight, and heat of all accessible objects.” This exploration is the act of an intelligent child which has grown up in the darkness of ignorance, not of a mutilated one-sensed idiot; and, notwithstanding the experience of the twenty months preceding the great bodily convulsion, speaks forcibly in favour of the opinion that, independently of the senses, of the stimulus derived through them, and of the materials for thought furnished from without, certain mental powers, personal identity and a craving for impressions from the Not-me may exist, grow, and attain vigour, in correspondence with the growth of the system, and in defiance of the most formidable obstructions. Her recognition of her mother, after an absence of six months, and when she was twenty-six months old, and through the instrumentality of touch, her outpouring of affection and happiness tell the same tale. Even then, behind the contributions from the single and feeble inlet of knowledge of the one-sensed idiot, there may be faculties and feelings which cannot be reached, or can only be partially reached in the present state of science.

That amaurosis, long and short sightedness, and that imperfect vision met with in the aged, where objects are seen as through or enveloped in mist, are more frequently met with among the weak-minded is true; but this occurrence is not characteristic: whereas, when it is discovered that form and magnitude may be cognised without any perception of colour, we are carried back in the search for an explanation of this phenomenon to those exceptional cases of colour blindness, which are, however, now known to be comparatively of frequent occurrence, even in minds exercised in observation, to the perversion of sense concomitant with certain species of insanity; and to that theory which admits a plurality of distinct and special powers for the recognition of the different secondary qualities of matter, and which may be injured or destroyed with material injury to the general capacity. The same limitation exists in the operation of other senses, as in vision. An idiot may be sensible to pain who does not notice heat. Music, or the sound of friction of paper is heard, while speech produces no effect upon the organ. The Sauvage d'Aveyron, was unmoved by the discharge of a pistol, but was roused by the cracking of a nut. The sense of smell may not exist at all, or it may appear exalted, as in the blind, conferring a power of distinguishing particular persons, woods, metals, stones; or it may be perverted, seeking gratification in offensive and disgusting effluvia. The preference of such smells, and the substances from which they spring, to the most exquisite perfumes, is common to this class and to the insane. It may appear exaggeration to speak of the cultivation of the power of attention where the impressions are so few, and the sources of distraction so slight as in the idiot mind. But, however small the number of mental states, the power of concentrating one or other of these, of dwelling on or in a condition of consciousness, is signally absent. This is partly explicable by the incessant discoveries and accretions which are crowding in upon perception, by the tendency to imitation, by the difficulty in regulating the eyes, and the intensity of reflex impressions, and by that muscular irritability and restlessness which sustains the whole frame in movement, pulsating, vibrating and as if quickened by internal impulses; such incessant movements unquestionably proving a source of disturbance to that fixity or continuity of action which keeps one object of contemplation before the mind to the exclusion of all others, either designedly, or without known design. But even where the range of mental vision is restricted to a comparatively narrow field, to two or three cognate impressions, and where these sources of agitation do not exist, and where the same objects must necessarily be at all times before consciousness, the same defect is observed, and the belief is suggested that attention, or the continuance in the same mental state, is a power apart from the things which are attended to, and is super-

added to the act of consciousness. The instruction in the exercise of such a power, which forms one of the first stages in the training of the idiot, is a confirmation of this view. When expansion of experience has taken place, when varied and complicated perceptions pass through the mind, there is generally observed an absence of the power of unification, of bringing together, ordering and harmonising accumulated impressions, such, in fact, as go naturally to the notion of entireness and unity. This continues to characterise the educated imbecile. At the point where the attention *can* be attracted and directed by the will of the individual, or by that of others, the moral life and training of the idiot may be regarded as having fairly commenced.

We do not attach much importance to what has been described as fixation of vision. At one time it formed, or was claimed, as the characteristic feature of the system of training the imbecile in Bicêtre, where it originated, but where it has long since been discontinued. But as the experiment was undertaken with the view to call the attention to the external world, and to particular objects, a notice of it is called for. The author of this plan likewise entertained the expectation that when he succeeded in obtruding his own image upon the consciousness of the idiot, and attracted and fixed his gaze upon himself, he thereby established such a connection as to secure recognition and obedience to his will; and so essential did he regard such a relation, that he is described as sitting opposite to a rolling and rebellious eye for five weeks, in the effort to form the tie. In carrying out this process, the operator is seated before the child, holds his hands and feet, and follows his eye. Upon the first occasion that the glance of the teacher arrests that of the taught, and the idiot becomes conscious of the object upon the retina, in fact, sees distinctly for the first time, he often struggles and screams; but during succeeding trials, in place of passing his hand over the person in order to convince himself of the identity of his preceptor, he will steady his eyes and look at him for an instant, as if something entirely new to him, continuing and prolonging his scrutiny upon future occasions, until his curiosity is satisfied. We have witnessed something of this recognition and union of the idiot with his fellow man; and although it may be difficult to believe, with some of our fellow labourers, that the act formed a crisis in the moral being of the pupil, or that any specific influence was established over the emancipated mind by the supposed liberator; yet the enlargement of intellectual vision thus, or in some manner, consummated, and the new relations suggested, appear of so solemn a character, as to recall the narrative of the sensations of Cheselden's patient. But besides, and independent of, the mere influence of the human eye, the vision is guided, and attention roused by placing the child in a darkened room, traversed by a single ray of light, or

in which there is a single luminous point, or by directing the eye to phosphorescent objects on the wall, or by causing brilliant objects to pass rapidly in the line of vision.

The ease and rapidity with which impressions fade, or are displaced in the idiot mind, is a well-known fact. There can be, accordingly, no general power of memory. But the distinctness and tenacity with which a series of impressions associated with pleasure or pain are retained and reproduced, contrast signally with the oblivion of words and of acquisitions made under instruction. We have hitherto spoken of crippled or unevolved powers; but in certain rare exceptions there are encountered aptitudes and talents which almost deserve the name of genius when compared with the feebleness of the class or even of the individual in whom they appear. But even where strength has taken the place of weakness, and where great proficiency has been attained in a particular direction, there are still detectable unhealthy features in the nature, the arrangement, or the mode of application of the ideas collected. Memory, whatever theory may be formed as to its origin or laws, is not necessarily the characteristic, although it may be an element, of a great mind. The words, facts, tunes, stored up and reproduced in minds of stunted growth are retained as isolated and comparatively useless materials. They are neither arranged, amalgamated, nor utilised,—they neither impart strength nor breadth nor comprehensiveness to the mind. Individuals are encountered able to repeat long poems without knowing the meaning of a line. Morel gives an account of an idiot who, although incapable of numerating the length of twenty, could repeat the names of all the saints of the Calendar, and the days of their respective fêtes. Every one in this country is familiar with the achievements of the historical idiot, who, on the slightest hint or cue being supplied, recounts in measured tone and stereotyped terms anecdotes or passages connected with every part of English history, who cannot go beyond his part, and is undisturbed by any attempt to induce divergence, who follows the inquirer in order to exhaust his store, but is much annoyed if interrupted before he reaches such climaxes as “and the punishment then for killing a fat buck was as great as for killing a king now,” and “if chroniclers are to be trusted, the herdsman’s wife boxed the king’s ears soundly for neglecting the loaves.”

A similar power has been observed to survive the ruin and chaos of dementia. If the mature and even the philosophic mind be indebted to language for all abstract notions, and for the very process of thought, it can be understood wherefore untaught deaf mutes are often imbeciles or of limited powers, and wherefore the capacity of an idiot seems to correspond to the extent of his vocabulary. This doctrine is open to modification. It may be exceedingly difficult to conceive in what manner the quality of hardness can, in

contemplating a marble, be separated from the size, form, colour, and become an object of thought independent of these without the aid of a sign ; yet many of the phenomenon observed in idiots, even of the lowest type, justify the conclusion that individual properties are selected and remembered to the exclusion of others, and of the object or basis with which they are connected, or, that certain impressions only reach and become objects of consciousness. As has before been stated one idiot perceives only certain tones ; another certain shades of colour ; a third fails to realise the notion of resistance, and receives blows and bruises in a vain conflict with insensate matter, while he recognises musical intervals and the relations of numbers ; and, what is directly connected with the present argument, individuals are frequently encountered who never acquire a knowledge of adjectives, but who act under a distinct appreciation of qualities which are presented to their senses, and which must to their apprehension appear as distinct existences. A B, who has no articulate or other sign, except for concrete impressions such as dog, cat, day, distinguishes the white dog from the black, and dreads the latter, and when he sees a black coat, &c., calls it "dog," and is agitated by the same aversion. Under certain circumstances such impressions expand into or fill the whole mind, and the idea of which it consists may be forms, colours, and their signs and nothing more.

There are individuals whose intellectual existence is concentrated in one bright spot of light ; who associate the notion of roughness and pain with every object but the surface of their own skin ; or who, urged by a vulpine appetite, seek gratification in whatever is soft or reducible by mastication. It is rash to assert that even these lower grades are destitute of attention, application of thought, memory, spontaneity, of which traces, although not the complement of such powers, may be discovered in the two-sensed, perhaps in the one-sensed, idiot. Even in the most incongruous and irrational proceedings of such beings, we may find indications of analogical reasoning, and even in the misinterpretation and misapplication of signs, evidence of abstractions where the language is bald and barren and monosyllabic. A pupil who has been punished may retaliate and subsequently inflict blows upon the rod ; but his blind revenge demonstrates that he regards and employs blows as indicative of anger, as the corrective of disobedience, or of some evil quality or tendency detected in the object struck. A refutation of an opinion attributed to Griesinger, that a mute idiot is incapable of forming an abstract idea, is afforded in the history of Massieu, an idiot by want of education, and in the manifestations of many congenital and necrocephalic idiots who can multiply, subtract, know the value of money, and that it represents certain commodities for which it may be exchanged. That general mental strength and range bear no necessary proportion to the natural or acquired know-

ledge of articulate signs of mental processes, is well illustrated in the case of the constructive idiot, so frequently adverted to in the Rev. Edw. Sidney's pamphlets on the Idiot School at Earlswood, who built the beautiful model of a ship. Those who are competent to declare the completeness and similitude of every block and rope, have pronounced the vessel ready for sea; and to a landsman the structure, from stem to stern, from keel to masthead, from the admiral's cabin to the cockpit, appears a marvellous specimen of naval architecture. Four years have been spent in completing this the second attempt of the builder. His original failure was attributable to his ignorance that wood could be bent by being placed in hot water. This effect was his own discovery; in fact, the whole model is a creation of his own constructive powers; as he is the son of a gardener in an inland county, and, although he passed several years in the carpenter's shop of the Institution of which he is an inmate previous to the commencement of this model, it is said that he had then never seen the sea, nor a river, nor a ship, save the representation of one in the middle of a pocket-handkerchief. However incredible this may be, when his work was nearly finished he visited a dockyard, and has introduced a few changes. This inspection suggested to him the operation of coppering, and the Victoria was safely raised by machinery of his own invention, executed by three idiots. He has been taught to copy drawings, and some of his productions are so excellent and curious as to form ornaments of the Palace. Yet this lad, now twenty-eight, remains a well-formed, pleasing-looking, small-headed, large-pupilled idiot. He can articulate a few words or imperfect words, but in general babbles. He is described during the current year as engaged with another ship, but as combining "ingenuity and skill with an unconquerable inability to reason upon common things, or to express himself intelligibly." He is vain and fond of dress. He has an idea of receiving wages on Saturday, but has no conception of the value of money, nor of the divisions of time, nor of eternity, nor of God. He cannot follow sentences; but must be addressed through substantives. He recognises no distinction in words, between round and square, but the latter to his mind indicates symmetry. He cannot write; but uses pictorial representations to express his wants.

Two grave errors have been committed in prosecuting this part of the inquiry. Idiocy has been regarded as prolonged infancy, and the constitution of the imperfect mind as a miniature of the matured and robust, and endowed with similar capacities differing only in degree.

Dim miniature of greatness absolute !  
An heir of glory ! a frail child of dust !  
Helpless immortal ! insect infinite !  
A worm ! a god !

Other fallacies have been founded on the suppositions that mutism or defective utterance was the most serious barrier to improvement, which, being once surmounted, the spiritual nature would be set free ; and that on the application of the ordinary means of nutrition and training would be evolved into a perfect being. It is true that many of those designated idiots are mental starvelings, laggards, undeveloped creatures, to whose cure or quickening or progress the appropriate stimulus is only wanting. But in the mass of those of whom we speak the imagined potentialities are chained and confined within the impregnable prison of a diseased organisation ; the power of language, of recognising the relation of the articulate sign, and the thing signified may be absolutely wanting ; and, although the power may be present, the physical conformation of the organs of speech is such as to render articulation impossible ; and success is chiefly to be expected where the obstacle rests either in defective volition or in defective co-ordination of the muscles engaged in articulation.

It may be enumerated among the curiosities of literature that the first suggestion and impulse in the philosophical analysis, and in the education or cure of the imbecile mind, originated with the Philosophers, or with medical men acting as Philosophers, and not with Physicians. They desired to solve a problem rather than relieve humanity ; to decide a controversy, not to eradicate an evil. The dispute as to innate ideas is perhaps coeval with thought. The opposing parties represent different forms or tendencies of human opinion. The discussion has been, and is now, conducted with various degrees of energy and interest ; but periods have occurred when great crises and triumphs were anticipated. The beginning of last century was one of these. There was at that time captured in the woods of Hanover a naked, hairy boy, about twelve years of age, supposed to have been deserted by his parents, who uttered no sound, walked on all fours, or climbed trees like a squirrel, fed on bark, grass, and vegetables. Before this genuine, unsophisticated man could be corrupted, or his primitive mental condition disturbed by civilisation, he was brought to this country by order of George I, and intrusted to Dr. Arbuthnot, that the mind might be explored, analysed, and reduced to its elements ; and thus the great problem worked out. The experiment failed lamentably in every way. The philosopher was frustrated in his search for the confirmation or refutation of an *à priori* philosophy. Peter the Wild Boy proved to be an ineducable idiot, who could not be brought to perform the simplest manual act, such as the loading of a cart ; who pronounced King George "Ki Sho," and Queen Charlotte as "Qui Ca," and whose education was concluded by his contracting a decided taste for brandy. Yet his advent and the investigation to which it gave rise were regarded by the learned and speculative of that time as

epochs in the history of philosophy. One of these, a Scotch metaphysician (Montboddo), declared, ecstatically, his appearance to be a much more important event than the discovery of a planet, or than if the astronomers, to the catalogue of stars already known, had added 30,000 new ones.

Almost within our own recollection, when the reveries of Rousseau had, in a neighbouring nation, assumed the dignity of a creed, and his followers constituted a school of philosophy, the Sauvage d'Aveyron was hailed as the exponent, as the perfect and natural man; and the observation of his mental condition and his education were accepted as the mission of one celebrated man who participated in these views. Itard is said to have devoted himself for seven long years to this task, and to have exhausted all the originality and ingenuity and zeal, which he undoubtedly possessed, to build up the civilised and artificial upon the base of the savage or pure man; and in the application of his axiom that "the senses are the soul." No such magnificent results as were hoped followed, but the attempt was not altogether fruitless. A few impressions were communicated to Victor, and, although Pinel's opinion that he was an idiot was fully confirmed, and he was immured for life in an asylum, yet the expediency of assimilating much of the training of the weak-minded to that employed in the case of deaf mutes was recognised.

Speech in the idiot, whether natural or acquired, is infantile, scanty, and imitative. Although the proposal to arrange the class according to the power possessed of articulating words, forming sentences, or embracing all the applications of language, has been found to be impracticable, yet that a certain relation exists between this special and general capacity is probable. Idiots of the lowest type never attempt to articulate, or to utter a sound. The cries of animals, or sounds emitted from inanimate objects, are imitated and become the expression of instincts and passions. It is narrated of wild children, who may be idiotic solely from deprivation of training, that they howl, bark, or cry, in the same manner as the animals with which they are associated. Of 28 idiots received into the Massachusetts school in 1851-52, 17 were dumb, many of them absolutely so, the others making two or three sounds, resembling words indeed, but which they used only as exclamations and interjections; 4 used single words correctly; 5 could construct simple sentences with more or less grammatical accuracy; and only 1 used language well.\* In a Table before us, including 1341 cases, the following psychical defects are enumerated:—13 are altogether insensible to pain; 31 are blind; 44 are deaf; 249 are mute; 29 cannot maintain an erect posture; 22 cannot sit; 101 cannot walk upright, although some of these move about on all fours; 103 cannot

\* P. 13. "Third and Final Report of Experimental School, &c., and First Report of Trustees of Massachusetts School for Idiotic and Feeble-minded Youth."

feed themselves; 315 cannot master a button or a tie; and 7 resist all attempts to clothe them.

In the process of culture, substantives are first taught; but what is peculiar in many cases, the acquisition stops at this point, and although a sufficient number of vocables may be remembered for the wants of the individual, they are neither qualified nor connected, and form the only means of communication. When nouns are associated with verbs, an advance is gained; but the ends of language are still much circumscribed. As verbs imply assertion, a predication, a will to do, it is intelligible why they should not be embraced till a late period of life, and rarely used by individuals characterised by the lack of that mental condition which they represent.

The ready acquisition of substantives may be explicable both as a law of the growth of the faculty of language, and as a result of the incessant contact with the objects signified as ministrants of pleasure or pain, and of the varied impressions made by them on consciousness through the external senses. The absence of adjectives, in some cases, may depend upon the imperfect and late development of that abstraction by which qualities are separated from the object with which they are in consciousness primarily associated, and then connected with other objects not previously known to possess them. The rarity of the use of the personal pronoun by idiots is remarkable. They pronounce their name, they avoid substitution, or speak impersonally, perhaps from the feeble sense of personal identity which they possess, and from their still feebler volition. Egoism is undoubtedly involved in many of the brief expressions used; but I is a revelation. They are, in fact, parasites. They are part of their parents or guardians, they depend upon their personality, responsibility, thoughts, and acts. Even after their powers have been developed and trained, and they have become self-reliant, so far as the sense of the capacity to perform certain acts within a given circle of contingencies is concerned; they still require an impulse from without, they wait for the governance and guidance of another, in order to be moved.

Where phrases consisting of the elements of language are learned, they are so as entire sentences. This may be the process pursued in the healthy mind, but there is this difference, that they become stereotyped in the idiot, are never modified, and are used on all occasions, whether strictly applicable or not. Where the tuition of language has never been attempted, or has failed, there is occasionally met with the formation of a jargon of uncouth sounds, which, whether intuitively representing thoughts or wishes, or not, is found to be retained and repeated upon like occasions; a habit frequently observed in the insane. From many specimens of such dialects before us, we select one which contains the ascertained interpretation.

|                       |       |                        |
|-----------------------|-------|------------------------|
| Bee-wee . . . .       | means | Little, small, or few. |
| Handey . . . .        | "     | Up, out, away.         |
| Bobby . . . .         | "     | Wag.                   |
| Dindey . . . .        | "     | Cars.                  |
| Daw day . . . .       | "     | Sunday, God's day.     |
| Daddy-bean . . . .    | "     | A nurse.               |
| Gougy . . . .         | "     | Dirty, ugly.           |
| Homigy . . . .        | "     | Home.                  |
| Hou-day . . . .       | "     | This day.              |
| My . . . .            | "     | I, me, my.             |
| Own-hoo . . . .       | "     | Sugar.                 |
| Pee bay . . . .       | "     | Bread.                 |
| Tee-taw . . . .       | "     | Cold water.            |
| Ting-ling day . . . . | "     | Christmas day.         |
| Toody . . . .         | "     | A carriage.            |
|                       |       | &c., &c.               |

How far such gibberish may be the imitation of the speech of others we cannot say. Individuals catch up syllables, portions of words, or the last word addressed to them by others, repeat the sounds upon all occasions, and, by a singular transmutation of letters, which might serve to illustrate those changes in language which have been going on for ages, and still continue, produce groups of words which are recollect ed and used as means of communication.

In such cases of failure an explanation has been sought in the malformation of the organs of speech, and the defective intellect. In the conduct and character of the individual, however, there may be considerable talent or ingenuity and dexterity; and the real cause consists in the absence of that power by instrumentality of which man devises and employs vocal signs for his thoughts. The mode pursued in placing the idiot approximately in the position of man so endowed, is to familiarise his ear to the sound, to direct his attention to the muscular act by which the sound is produced, to induce imitation, and to connect the sound with the thing signified, or with a visible representation of it. But the process by which these steps pass into consciousness, and by which Will brings into action the vocal apparatus, must differ from that with which we are familiar, both in proportion to the difference in the powers brought into operation, and especially in volition; but likewise from the necessity imposed upon the idiot of overcoming the difficulty in connecting his act with that of his instructor, and these with the *cat*, *cube*, or *colour*, the name of which he is called upon to pronounce; and, lastly, in co-ordinating muscular efforts in obedience to the instigation of imitation. The mere act of instruction stimulates the brain even where it falls short of the intended aim, many idiots presenting indications of excitement during object lessons; and the law by which the frequent association of impressions on consciousness establishes an indissoluble relation between them, overcomes many of these obstacles.

That physical defects in the palate, tongue, &c., must greatly impede the progress of the mind, is obvious, and that in certain

cases they may be the cause of imbecility, may be granted; but that such obstacles are perfectly compatible with sound intelligence is shown by the phenomena of deaf-muteism. Even the capacious and educated intellect is so dependent upon the articulate sound for precise notions of the thing signified, and for assisting memory, that the want of such an instrument in the idiotic must circumscribe and retard their development. Speech is hailed by their teachers as a vast stride in the direction of enlightenment. It is not, however, generally the first advance accomplished, and the vast accumulation of heterogeneous knowledge made previous to this discovery, would go to show that it is, perhaps, an erroneous arrangement to commence education by scholastic training.

This is further countenanced by the suddenness and rapidity with which the acquisition is sometimes made. It is not always by a tedious and toilsome labour of alphabets and syllables, and orthographies. Abruptly the child utters words, sentences, evidently in virtue of imitation of what he has observed the lips and mouths of others do.

When we speak of idiots using language we must exclude from consideration the 50,000 words which might be articulated, and the 4000 supposed to be necessary to express thought and sentiment in all forms; and confine our observation to the two or three vocables to which their communications are actually confined. In an analysis of 20 speaking idiots 7 are found to have acquired many words; 1 many real words, without attaching meaning to them; 2 to employ an unknown tongue; 1 to use two, a noun and an adverb; 1 to use three, one noun and two pronouns; another three, consisting of a noun, pronoun, and adverb, a third, three, a pronoun and two adverbs, and others of the series 4, 5, 6, 8 words respectively.

The subject of education is not here embraced; but there are several characteristics of the progressive development of the idiotic mind, and which seem to imply unhealthiness, that may be recorded. 1. The rapidity of acquisition in certain cases, but up only to a certain point; the slowness of the great majority. 2. The difficulty of imparting two or more departments of knowledge at the same time, and the displacement of one acquisition by another. 3. The rapid relapse of the trained idiot into the original condition of ignorance and hebetude. 4. That increased nourishment, or more judicious diet, promotes acquisition.

Few idiots understand natural language. Except as a result of imitation, they rarely have recourse to it as expletive of their meaning, and as they often feel none of the passions and emotions of which it is an expression, they are not influenced by it when used by others. One great impediment in manifesting such signs is the striking passiveness and torpidity of the muscular system, which less or more cuts it off, as an instrument, from the will and notions by

which it is brought into relation with the mental state. The mobile vivacious restless child, illustrates another difficulty. He fails in controlling or regulating the muscular excitability, which becomes rather a vehicle for automatic than volitional suggestions.

The extreme restlessness, the perpetual motion observed in so many of this class, which blindly impels to so many absurd acts, and entails so many catastrophes, may be connected with the predominance of the ganglionic system, the influence which light or temperature may exercise, and the dormancy and effeteness of the will. Nor is this excitability of the medulla purely functional or referable to speculative causes ;—as the rachitic state of the spine, and consequent physical irritation in so many cases,—apart from the effects of the participation of the nuclei in the strumous diathesis ;—and the sensitiveness of constitution which is a neurotic element of that diathesis, must sustain a susceptibility to internal stimuli of which the healthy know nothing. A slight irritation of particular spots throws the muscles into tremor; a sudden noise or blast of air induces convulsion. While guarding against the belief that the majority of the acts of idiots are automatic ;—even the friction or rythmical striking portions of the skin, and above all the practice of masturbation to which hundreds utterly ignorant of sexual tendencies are addicted, may depend upon intimations borne by afferent nerves to the medulla, of which consciousness has no cognisance. The bullimia so often observed, and where food is neither craved nor sought for, but taken or swallowed without attention, or appreciation of its qualities or quantity, may legitimately be classed among the same phenomena, and associated with irritation, originating in impaired or morbid digestion and nutrition.

The attitudes, eccentric and extravagant gestures, of individuals may belong partly to the dominion of volition and partly to the influence of reflex action. This view is strongly supported by the possibility of teaching individuals to relinquish such habits—to will and act otherwise. “*Elle offrait*,” says Dagonet, describing a girl belonging to his third degree of idiocy, “*le tic du balancement lateral, crachatait, bavait de manière à tremper son fichu, ne se mouchait jamais, et léchait constamment sa lèvre superieure qui avait finie par devenir le siège d'un exemthèse rebelle.* A force de patience et de soins on est parvenu aujourd'hui à lui faire reciter sa prière, quoique d'une manière unintelligible et ne bave plus, ne crachote plus, se tient assez proprement et a perdu le tic du balancement,” &c.

In general, however, such movements must be determined by affections of that sense of equilibrium and regulation of motion which have been supposed to be connected with the cerebellum. A child oscillates from side to side for hours or a life-time; another rocks, but moves backwards and forwards. These directions cannot

be accidental; the individuals presenting these peculiarities swell into classes. We find others striking, depillating the head, and always the same spot of the head; clapping the hands, balancing the hands; going on all fours; burrowing, pronating, supinating, alternately elevating and depressing a shoulder, rolling the head on the pillow, rushing with irresistible force and fury forwards or backwards, or walking interminably in a circle from right to left, as the case may be, for years; or standing immobile. That such modifications of muscular motion may in certain cases and circumstances be regulated by choice, and bear some inscrutable relation, partly as consequences, partly as expressions, to mental states is probable, because they are frequently witnessed in the insane and generally where the brain is structurally diseased; but are then intended and proclaimed to be means to an end, compliance with a Divine command, the solution of a geometrical problem, or the revolutions of a moral machine.

While the ordinary gait and gestures of idiots are vacillating and uncertain, and betray either lack of purpose or of muscular power or of both, these tremors and irregularities often disappear under excitement or irritation, give place to rapid well co-ordinated and regulated movements, which again give place to the habitual stagger when the emotion subsides. Yet in many the voluntary position is not only stationary, but statuesque; constrained or extravagant postures are assumed and preserved for a length of time which must necessitate a sustained effort of will. Fixed to the same spot they display attitudes or movements of the limbs and trunk involving purpose, and which are in themselves graceful, or grotesque, or rhythmical. So fixed and rigid and prolonged is such a position in certain cases that there must be an object as well as a pleasure in the act.

The late development of the will as well as of the power to walk; and, still more, the want of correspondence between the perfect maturity of the muscles and the torpidity of the will, deserve comment. Idiots do not walk, nor apprehend, nor feed, nor dress themselves until they are five, ten, or twenty years old, if at all. Fear may interfere and suspend certain of these muscular combinations, but according to the popular theory of volition fear might accomplish and perfect others. While among idiots, will generally corresponds to the strength and degree of advancement of intellect; it assumes the aspect of disease when directed by the instincts of their nature. They more resemble their fellow-men in their propensities and sentiments than in the other parts of their character, and they are most widely separated from their fellow-men by the tyranny which these impulses exercise. They are, in fact, often a congeries of appetites. They may be vain, proud, passionate, erotic, degraded, presenting no redeeming trait, and no other trait of

humanity except its failings and vices. There are drunken, dissolute, sanguinary, incendiary idiots. Their moral tendencies are, it is true, more exposed to observation, as there are no conventional habits to overlay, no cunning to conceal, and unfortunately no sense of prudence or propriety to moderate the manifestation. There is, moreover, no intellectual volition to control or subdue such exhibitions, or to direct them into legitimate channels; so that they are protruded in all their rankness and foulness and force into surrounding arrangements. The force and fierceness with which certain passions and propensities, such as lust and anger, agitate the idiot, are characteristic. The energy of such impulses may be partly in relation to the absence of the controlling powers of reason and conscience, as is observed in degraded and uncultivated natures; but the manifestation sometimes amount to a blind and indomitable fury. But volition, which is paramount and irresistible under such instigation, fails to regulate many simple acts and movements even when the muscular apparatus is perfect; and is incapable of giving consistency and permanency to the mental processes constantly passing through the mind. Men of powerful and herculean mould and savage and inflexible purpose cannot undo a button or pick up a pin, or determine spontaneously upon a course which they are made daily to follow. There may likewise be mentioned what is fairly designated a divided volition, where movements in a particular direction, or for a particular purpose, are executed, but where others equally practicable are never performed, or only performed under menaces; and where certain words are articulated and always repeated to the exclusion of all others, even where the utterance of these lies within the capacity of the individual, and where they have been uttered. The approximation, if not the identity, of these symptoms in the idiot class, with those observed in the insane, may be illustrated in another way. An analysis founded upon cases drawn up by an indulgent guardian of an Idiot School containing forty pupils, showed that individuals had exhibited the dirty and degraded habits of the dement, the malice of the cunning maniac, the theft and hoarding of the kleptomaniac; the preference of solitude of the lypemaniac; the incendiariism, the jargonising, muteism, refusal of food, and the unnatural appetites of other forms of insanity. It may be observed that these manifestations are one and all the exaggerations or perversions of instincts which the weak-minded are known to possess.

The command and precision imparted to muscular action by training, and even by mechanical contrivances, and the contemporaneous or subsequent development of the exercise of volition over the particular organs trained, is a corroboration of the growth of the will. Besides the mere local guidance and support afforded, it is probable that the stimulus conveyed by the impressions transmitted

to the brain may call into increased activity portions of the nervous system hitherto passive or dormant.

In whatever light the imaginative faculty may be viewed, whether as primitive or as a result of other mental processes, it may be predicated that from the imperfection of the powers by which impressions are presented, intensified, associated, separated, and by the poverty and paucity of the impressions themselves, such a faculty will be of feeble development in the weak-minded. Where colours are not perceived they cannot be added to gild and gladden a landscape; where terror is a blind instinct it cannot form an element in the conception of the sublime; and where every object is perceived in the concrete it appears impossible for fancy to ascend to any extent into new combinations except those of order and arrangement. We are scarcely entitled to allude here to inspired idiots, in Johnson's sense; but verses have been written by imbeciles, and many poetic and picturesque sayings have been recorded as proof that their minds can soar into the realms of idealisation, and can create new and pleasing conceptions from common-place materials.

"Early next morning," says the author of 'Mind Unveiled,' "before rising, the room-door of the writer slowly opened, and Edward, with most of his clothing hanging over his arm, entered with an eager step; he advanced toward the glass door that faced the east, and with raised finger and unwonted fervour, he exclaimed, 'look there!' The grey of dawn had receded before the rich colours of sunrise, and that gorgeous sky had thrilled the soul of poor Edward.

"'Look there! red, blue, orange, all kinds.' His small vocabulary seemed exhausted, his lips were parted and his eye returned for the rich beams of that beautiful sky what was equally beautiful—the intelligent gaze of a dismantled spirit. His bosom seemed to thrill, and his whole form expand and heighten with the swelling emotion, as with riveted eye and outstretched arm he uttered in a subdued voice, 'God in heaven!'"

So far as the sense of the beautiful, the inventive faculty, or that speculation which carries us into the true but the unrealised, are concerned, the aspirations of this class are feeble and puerile; but so far as the idealisation of ordinary life, the addition of qualities to visible objects so as to confer life, animation or elevation, so as to form pictures and romances, which are event pictures, can be regarded as the suggestions of imagination, many of weak mind share the gift with their fellow mortals. But as in those who dwell and revel in the supersensuous, and as in the insane, many of these creations are dreams and phantasmata, over the origin of which they have little control, and from which, as in the same classes, they cannot withhold their assent and belief. The sleep of the weak-minded is rich in such materials. They laugh, start, ejaculate,—Laura

Bridgeman even talked and revealed her fancies upon her fingers during dreams,—and when able, recount delightful or horrible experiences. If golden mountains or silver streams in heaven are presented to such an intellect they become real, and are as distinctly visible as the heath-covered Grampians, or the swelling downs of Kent. It is, however, clear that to whatever extent credence may be given to such a Utopia, the influence of fancy in lighting up and embellishing the inner life is in a humble fashion widely diffused among this class. Idiot children personify toys: one chair is a carriage, another is a horse; they lay out imaginary banquets; they enact impromptu scenes or imitations; they delight in Punchinello, and the Shop-play.

Castle building is perhaps as common as among healthy children, although the materials employed, and the structures erected, are more unseemly and rickety. In both cases the dreamer is the hero of his own romance and painted so as to be a flattering and interesting likeness. Seguin writes:—“Incapable de comparaison rationnelle, de jugement, de reflexion, de deduction, elles se livre à toutes les fantaisies que provoquent en elles les circonstances de lieu et de choses qui l'environnent; de là une apparence d'imagination dont les saillies et les excentricités seduisent au premier abord, mais dans laquelle on ne tard pas à reconnaître que les circonstances ont plus de part que l'inventivité proprement dite.” In many imbeciles the habit to varnish or magnify actual details, or to construct aimless fabrications, is correctly attributed to falsehood, the spirit of mischief, or to a deliberate desire to deceive. As many are entitled to be regarded as moral, as well as intellectual idiots, as many have been corrupted, taught to mystify and invent; and as truth in others is either of late growth, and a principle communicated by precept or training,—it is necessary to distinguish between what is sportive fiction, and what deliberate untruthfulness. It is an interesting revelation that sincerity and honesty of purpose grow with that amelioration and reformation in the disposition which, in the great majority, is effected even where the attempt to educate has failed.

Many idiots readily acquire psalms and hymns; many others are fascinated by the sonorous reading of poetry, where the only attraction can be euphony, or the succession of harmonious intervals. It may be the tender and emotive, as well as the measured and modulated tone, or the rhythm which arrest attention; but it may likewise be the sound of particular words, as certain expressions, chiefly those implying magnitude, height, divinity, brilliancy, have been observed to exercise marked influence, and that independently of the meaning and of the relations in which they occur. That an appeal is thus made to wonder and marvellousness, to the unmeasured and the unknown, cannot well be doubted. The singular

similarity which in some instances the jargon uttered by idiots bears to spoken language, and, above all, to versification; the regular monotone in which it is chaunted forth; and the regularity with which automatic movements are performed, suggests the existence of an internal measurement of intervals. Whether deriving data from such a source many idiots who are ignorant of the artificial divisions of time, who cannot estimate minute portions by any natural signs, such as the alternation of light and darkness, and whose impressions are too few and stationary to provide a subjective standard by which to calculate the passage of time, it is difficult to determine;—yet they display a surprising exactitude in noting intervals, and in the expectation of the return of particular events. A group of educated idiots has been tested in this particular, and without reference to clock or watch, in the dark, and without any clearer conception of the object or meaning of hours and minutes than what might be suggested by meals, lessons, play, they were found able to state with great precision, the hour, and even the minute. Savages with greater, certain sleepers with less, assistance from external circumstances, possess a somewhat similar power.

There are imbeciles who display an intuitive feeling of right and truth. Every village affords examples of half-witted errand boys, who, although they cannot tell how many pence are in a shilling, are of such unimpeachable fidelity and punctuality, as to be intrusted with valuable property, and whose verbal accuracy in conveying intelligence is so great, as to constitute them the chosen depositaries and messengers upon important occasions. Were there not such redeeming instances, general observation might countenance the belief that idiots were endowed with no sense of duty but what is the result of training. They very early display a notion of property, and claim a chair, a spoon, as their own. They are pilferers, purloiners, exaggerators, falsifiers; they labour under disease of the moral sense, and they are cured of such morbid tendencies by instruction, example, and by that awe and submissiveness which grow out of discipline, rather than convinced by the moral and religious considerations addressed to them. That the quality of conscientiousness grows with moral growth is demonstrated by the education of non-idiotic children; a development which suggests the theory that, while the perception of personal rights may be innate, the appreciation of what constitutes the rights of others depends upon the enlargement of the understanding, and upon a sharply defined conception of personality. The fact, however, that the indications of duty may be found in very low types of idiocy, and that the sentiment bears no uniform proportion to the degree of intelligence, points to an independent origin. It is worthy of remark, that while certain idiots are naturally and spontaneously loving, kind, obedient, and even generous, sharing their property

and privileges with those around, their notions of justice seem, in accordance with Hobbes' theory, to be regulated by the standard which prevails in their confraternity, and are associated with reward and punishment. One individual robs his preceptor of five dollars, pretends that he found the money in a field, and admits his peccability when detected; another whips or scolds her doll because she is naughty; and a third, having been accused of an imaginary crime, submitted to an imaginary trial and was condemned to death, laid his head, as decreed, upon the cook's block, is supposed to be decapitated by the application of a wet dishclout; but in the sincerity of his belief and submission to the tribunal and the reality of its award, dies on the spot. The intense selfishness, or the solitary life in self of the idiot, and his lack of relation and sympathy with the outer world, sufficiently explain the tardy and obscure manifestation of such a power. Howe affords an illustration of imitation coming to aid a feeble and badly instructed conscientiousness. An industrious and self-supporting idiot was soundly thrashed when he showed symptoms of insubordination, when he really offended, or when his father was out of temper. When the cows offended him, or he was out of temper he thrashed them, when a rake or a hoe excited his wrath he dashed it to pieces. The father found that his severe discipline was useless, or was retorted on himself. He substituted bread and water for supper, a bed of a little straw upon the floor, with gentle advice. The son adopted the same course. Offending cows, rakes, hoes, were punished by a supper of bread and water, a bed of straw upon the floor, and an admonition.\*

Religious convictions, and a notion of God may be reached. Idiots recognise size, force, causation, rewards, &c. They infer greater force than what they can exert, or what has been exerted upon them, as they witness the effects of lightning, firearms, the deprivation of life and strength in others, who are, in relation to themselves, omnipotent. How often is God described by them as the good man, the strong man, and his word as good things! Although the deity of their imagination and belief may be little more than a "big, big man," their Heaven the blue sky, and their future the brightest sunshine of their happiest day; it may be questioned whether this simple creed differs very widely from that held by thousands who claim a higher intellectual position, or that it may not produce many of the results attributed to clearer and more correct views of divine truth. The process here supposed is closely allied to that pursued in teaching the deaf and dumb.†

That idiots, or any large number of them, can attain a knowledge of the infinite, or of a personal deity, through reason, or by any intellectual process, such as must obtain in the healthy mind, is a

\* 'The Causes of Idiocy,' p. 17.

† 'Puybonnieux,' p. 322.

proposition which cannot well be entertained. It would be merely to evade the discussion, or the difficulty, to fall back upon the doctrine of Schelling, and to affirm that idiots, as well as philosophers, may reach such a knowledge by passing into a state beyond consciousness, with which we are identified, and thus know it.

Of this condition we know nothing, and cannot, accordingly, predicate the capabilities of the idiotic, or of any class of mind during its continuance. These observations are rigidly restricted to the more obvious modes of operation of the human powers, and do not embrace the divine influence which may have acted on them, or through them. There are, however, narratives of devout persons of feeble intelligence, where strong religious impressions, and a craving for worship, for reliance upon something stronger, higher, better, were manifest, a dependence which, whatever interpretation may be attached to it, appeared to be of the same, and proportioned to, that childish faith and veneration and obedience with which they regard guardians and teachers.\*

A clergyman, who bestowed much time and earnestness on the cultivation of the idiotic mind, writes as follows:—"I do not think it possible for a thoroughly imbecile child, by any amount of teaching or training, to realise the abstract conceptions of Christianity. They can realise a great and good being; kind to them; who loves them when they are good, and is displeased with them when they are bad. They may call him "God," but they cannot realise this, or bridge the chasm which separates the two conceptions. I am sure that they can grasp a Great Spirit, who made what they see around them, but only as they may see a man make any article of wood. They cannot, I think, realise a Maker in the sense of a Creator, but only as an Artificer," &c.

The limited number of mental states, and the isolation of these, or their existence as independent and concrete propositions, interfere with the formation of those processes attributed to judgment and reason. These impressions in general follow each other without appreciable order, sequence, association. They are disjointed narratives of facts. Yet there are presented indications—parodies they may be called, of instituting comparisons, of tracing analogies, of a reference of events to causes or to antecedents which, though lame and impotent, serve to demonstrate the possession of the faculty and of its vitiation. A child impressed with the fact that his medical attendant wore a black coat and ordered medicine, inferred that all men with black coats were doctors; and whenever the family received a visitor so habited, he produced his physic spoon.

The deficiency of association guided by place, form, or succession, and the difficulty of acquiring a notion of progression in the idiotic

\* Rev. Edwin Sidney, Rev. W. Knight, &c.

mind have been illustrated by their repetition of the alphabet. The first letters may be said correctly, but a leap is then made perhaps to T or to U, and ultimately a return to B. But the perception of plan, progressive evolution, and of means to an end, is observed in many who acquire a knowledge of draughts. Charles Emile, one of Seguin's most celebrated pupils, was an adept in this game. A psychologist, doubting or desiring to test the boasted dexterity of idiots in this accomplishment engaged in a match this odd, and, after a sense, clever creature. My friend cherishes to this day a vivid and humiliating recollection of the discomfort and shame experienced on finding himself utterly discomfited, and on noticing the childish exultation of his conqueror, and the laughs and screams of delight uttered by his idiotic confraternity.

That even such educated imbeciles cannot rise to a conception of universals has been advanced. Their highest form of reasoning is the detection of dissimilar qualities; and they never employ such words as therefore, because, as, of, &c. That there is an adumbration of reasoning in their simplest and most incongruous manifestations must, notwithstanding, be conceded. An idiot is bit by a black dog. He, in future, runs from all black dogs, actuated, it may be supposed, by some such mental conviction as that all black dogs bite. This is a black dog, therefore it will bite. But we may as legitimately, perhaps as truly, suppose that no such figure as the predicate has occurred, or can have occurred, to the idiot, as this would imply a concrete idea of the species or variety of dog which he cannot possess, or that he recognises the dog as *a* black dog; *i.e.* as one of a number of black dogs; but that his caution is founded upon the conception that this is *the* dog that bit me, and will bite me again. But even this interpretation is open to the objection that fear may be roused by every black object, independently of any recollection of black objects formerly seen, or of injury inflicted by them. Idiots have been known to sow pounded sugar, in the hope of realising a harvest, and to roast a child in place of a joint. This imitation of the agriculturist and of the cook involved reasoning; but false reasoning, founded upon ignorance of the laws of animal and vegetable life. But a process assimilated to that of generalisation is demonstrable from the most ordinary acts. There are individuals who fail to establish or to recollect the relation between fire and their own sensations; and plunge their hands again and again among the coals. But there are others, apparently less liberally endowed in other respects, who, having been burned, not only recall the suffering and its cause, but infer that fire will burn other substances as well as their own body, and even the bodies of other persons as well as their own, and who act as guardians or custodians of children less experienced or less cautious than themselves. It may happen that beyond the ideas of fire, pains, my hand, every-

body's hand, all the steps comprehended in the inference are erroneous and absurd. It may be believed, for example, that the fire is a malignant being, that it seeks to give pain, that the pain and injury came out of the fire, not as effects but as specific entities; but these fallacies do not invalidate the correctness of the inference, nor the application of the law of generalising from particulars. Or results may be reached deductively. An idiot has presented to his notice daily the arrangement of the dinner-table at a certain hour, when a bell rings, when a whistle sounds, when the labourers return from the fields, when every one washes their hands, and a number of trivial circumstances occur. This duty is devolved upon him; and, although ignorant of the divisions of time, and unable to communicate with those around, he infers from the concurrence of these events that it has become necessary to lay the cloth, to arrange a certain number of spoons, which he does, except on Sunday, when another group of circumstances, the presence of the chaplain, the assembly for prayers, the suspension of occupation, the holiday-dresses of himself and his companions, suggest the exceptional sequence that knives and forks are required at the repast, which he carefully provides.

As has been previously stated there exist broad and palpable marks by which idiots might be classified, physiologically or pathologically. They might be arranged into groups according to their capacities to see, feel, walk, speak; or, according to the diseases, such as epilepsy, chorea, hydrocephalus, with which their mental infirmity is complicated and exaggerated, or by which it is produced. But they may likewise be distinguished psychologically. Individuals are of limited and infantile mind by privation, or denial of the powers which characterise sane beings, or by deprivation, where such powers are stinted or extinguished during the process of growth.

Whether depending upon non-development, or arrested or vitiated development, the mental result may be of two kinds. It may consist—and does, perhaps, most frequently consist—in the limitation of mentalisation, in the restriction of the faculties, in number and educability; in the stoppage of their growth at a particular point; but it presents in other instances the superaddition of delusions, furious passions, and incoherence to infantile weakness of judgment.

There may be the idiocy of imperfect maturation, the idiocy of disease, usually so called. There are examples of true and unequivocal mental disease, mistaken for idiocy by privation merely because they occur in the early years of life. We have seen an idiot of seven years old in a strait-jacket. Another opportunity may occur for investigating the origin and aspect of the uncontrollable impulses which agitate and influence such persons, of the dementia of memory which may be associated with feeble impressions and fickle attention, and above all of that complex state in which mania

and other forms of alienation are grafted upon idiocy, or, as it may be expressed, rush through chasms in the half-organised, uncoated intelligence, and then pass away, leaving the mind free from positive perversion, but as rude and rudimentary as before the incursion of active disease. At present we have to consider whether idiocy, although occasionally consistent with what may, in a sense, be styled the healthy exercise of the faculties within the range assigned to them, may not be legitimately regarded as a morbid state, a form of insanity. This state must not be predicated merely where there are severe bodily ailments and infirmities and obvious lesions of the nervous structure. Nor does it consist simply in oddities and extravagances which are explicable on the supposition of impairment of volition, or moral perversions, or of disorder and discord in the constitution, or in the relations of the reasoning and emotive power, or of that variety in the normal disposition which is observed in those of imbecile minds. There are from time to time committed to asylums persons of very low capacity who have rendered themselves obnoxious to society by their violence, by their sanguinary or salacious tendencies, who present the wild frenzy, the restlessness, the sleeplessness, the augmented strength, the vitiated secretions of maniacs. There are others who are subjected to seclusion because they are sombre, sullen, menacing, who cease to act, work, speak, feel, as they did under ordinary circumstances ; whose pale and wan and woe-begone aspect, cold surface, defective nutrition tell as forcibly as their cries, complaints and tears, of despondency, despair, or fear. Such patients have meditated or attempted suicide ; as those previously described have designed and committed murder, or parricide,\* or rape.† A diminutive frame, a feeble physical power do not preclude fatal results when the homicidal or destructive propensity exists in those of weak mind. An attendant simulating a corpse was placed beside an idiot for the purpose of testing his supposed immunity from fear. When the dead body moved the subject of the experiment chopped off a foot, and then, roused by the cries of his victim, decapitated him. Another killed two nephews ; and we have recently seen two imbeciles, who, without any apparent provocation or external cause, destroyed fellow patients, under the influence, it is legitimate to suppose, of a homicidal impulse. It is highly probable that many members of the supposed criminal class described as hecate, stupid, stolid, who, to the astonishment of all, and in palpable inconsistency with their ordinary disposition and deportment, committed some frightful outrage, come under this category, and are at the moment of the atrocity maniacs, but before and after partial imbeciles.

Did the undeveloped mind of the idiot differ only in strength and scope from that of the mature adult, and were it susceptible of

\* Ann. Med.-Psych., t. viii, p. 108.

† Ann. Med.-Psych., t. ii, Quat. Ser., p. 57.

growth and decay within its own limits, it might be expected to succumb to disease. The experience of many observers has, accordingly, demonstrated not merely that idiots differ in natural disposition, and are gentle, sullen, sad, cheerful; but that they present the symptoms of transitory delirium, delusions, paroxysmal fury, and even of melancholia,\* either as complications or as additional phenomena of the general structural condition of the nervous system. Epilepsy and chorea and less prominent affections are very frequently found combined with all forms of idiocy. It is a matter of speculative interest to inquire whether the violence and virulence of temper, the infantile mania, in fact, which agitates the idiot and disturbs all domestic arrangements, is a link in the chain of morbid actions of the nervous system, or a specific and distinct disease, recognised when it occurs in the more intelligent members of the community, but in this instance engrafted upon a weak and in expansive mind, and depending upon remote causes, having no connection with the congenital or ordinary mental life of the individual. The latter proposition is countenanced by a few facts which appear to demonstrate that where idiocy is connate, various forms of alienation may be inherited; in other words, where a child of deficient intellect has had a parent of a robust and educated mind, but subject to derangement, the same malady has been superadded to the mere privation of power. There are other instances in which idiotic children, the offspring of parents one of whom was in a state of dementia and the other of great irritability of temper, have presented the enfeeblement of judgment and impairment of memory of the one, and been subject likewise to ebullitions of fury limited and modified by physical impotency and feebleness of will.

A very cursory examination of the idiotic class, even when left under domestic rule, will convince that they are not always either the happy, or innocent, or harmless, or the simply rudimentary beings that they have been depicted; but that in many, although perhaps not in a majority of them, there are sources of misery and discontent, vice and corruptions, and offensive and irrational habits and egregious absurdities and perversities in conduct and belief which must be dissociated from mere simplicity or feebleness of nature in any estimate of their condition, although such manifestations may originate in a common source. C. F. sees and fights with the devil; A. F. hoards every morsel of metal as gold; E. G., a dwarf, conceives himself Colonel of the 92d., was attired in the glorious panoply of an old red coat, strutted about in feathers and medals and ornaments, and showed how fields were won or lost so truthfully that his warlike qualities have consigned him to an asylum. It has been the fashion to confound or comprehend many of the less abstruse of these peculiarities under the epithet "tic." This is a

\* Esquirol, t. ii, p. 302.

French cloak for ignorance, or for a false theory. Every act in the infantile as well as in the maimed and morbid mind is the consequence of a previous mental condition; and our failure in tracing oscillation, gyration, &c., in idiots to a recognised cause does not place them out of the category which comprehends Addison's stare, or Samuel Johnson's passion for orange-peel or for touching lamp-posts. Observations similar to those above have been made where the numbers of this class have been carefully selected as suitable for culture, and have been for a time subjected to training, which, whether equal to the wants of the pupils or not, was certainly calculated to guard them against those impressions or associations which suggest and nourish morbid fancies.

In twenty-seven individuals, from seven to twelve years old, thus favorably situated, several presented phenomena which might, inferentially, be supposed to indicate exalted imagination, but five were found in whom hallucinations in the ordinary acceptation could be demonstrated to exist. E. L. saw objects during twilight, followed them with his eye to the roof of the house, and clutched at them. He spoke only a few words, so that precise information could not be obtained as to the form, colour, &c., of these objects; but he was delighted with the phantoms, and said that he made "music out of them." D. M. heard musical sounds, and listened to them, and was terrified by these visitations; but as he had gained ground, and his mind expanded by education, he gave less evidence of listening to the "fairy pipes." L. O. saw the devil on her shoulder, and called to her companions to take him away. She took a stone to cast at him. Occasionally, she says that she saw him in her heart, and that she reads of this in the bible. M. T. cried out that she saw a dog. R. L. gazes on the sun and moon; gazes anxiously for them, and often says that he sees them, when they are not visible. Here are illustrations of hallucination of vision, hearing, and touch, of the sense most frequently affected, partaking of different aspects, and inspiring different emotions, corresponding, it may be fairly held, to the predominating character and temperament of the spectre seer, and to have been suggested by them.

It is well known that the savage, or what is a synonymous term, the undeveloped races, are victims to superstition and credulity, to interpretations of external impressions, which amount to hallucinations, and surround them, subjectively, with unreal sounds and sights. Delusions appear to grow up rapidly and rankly in the young of the criminal class when subjected to prison discipline. Recent investigations have made us familiar with the prevalence of visions in children;\* but a careful scrutiny of any school will demonstrate that such an occurrence is comparatively

\* See on this subject, 'Life of Girolamo Cardano,' by H. Morley, vol. i, p. 35.

rare, and when it is detected, can only be detected in faint shadowings, and doubts, and panics ; or that where such impressions stand out boldly, sharply, and indelibly, that they are unhealthy, precocious, imaginative, and that such disclosures may be ranked with the prognostics, if not with the symptoms of morbid action and critical constitutional changes.

Brière de Boismont says, “L'imbecile conservant plusieurs facultés, peut avoir des hallucinations et des illusions. L'absence complète de l'intelligence chez l'idiot et le crétin en rend la production impossible.”\* This might be assented to when mindless idiots are discovered, but delusions have been observed in those of low type, and of a permanent character ; and merging ultimately, as in the case of D. M., alluded to in the preceding page, in unequivocal alienation.

*Neuropathy, or Vaso-Motor Therapeutics : a New Method of treating disease through the agency of the Nervous System.* By JOHN CHAPMAN, M.D., M.R.C.P.

DISEASE, in the great majority of its forms, consists, according to the most scientific pathologists, in either an excess or deficiency of those transformative processes by which new structures are built up and the old dissolved and carried away, and on the continuance of which the healthy growth and sustenance of the organism depend. Until an animal is full grown the constructive processes are in their maximum state of normal activity ; while, *relatively*, the destructive processes are at their maximum of abeyance. But for the continuance of healthy adult life the balance of organic change must remain always even : growth must be equalled by decay ; the agents of each must do equal work. If after the attainment of maturity the *relative* activity of the composing and decomposing processes should continue the same as before in any part of the organism, hypertrophy or abnormal growth would be the result. If, on the other hand, that relative activity is reversed—the destructive metamorphoses becoming predominant, either locally or generally—there is corresponding atrophy. Moreover, as one of the essential conditions of normal life, the co-ordinate action of the constructive and destructive agencies must range, within certain degrees of rapidity, beyond those limits in either direction the regions of disease are entered on. If that action be unduly slow, the physical frame is weak, the emotional nature is apathetic, the intellect lacks energy—systematic thinking being a toilsome or impossible task ; if successively slower still, corresponding phases of vital degradation are passed through, until

\* ‘Des Hallucinations,’ &c., p. 180.

at length death itself ensues. If, on the contrary, the transformative processes be unduly rapid, there is exuberance of activity, both muscular and mental: repose is suffering; the feelings are intense, but quickly changeable; the intellect exhibits an excess of energy—ideas too rapidly formed to admit of adequate development chase each other through the mind in quick succession, and, having no stability, fail to become effective forces, shaping the life of the individual to some great or definite end. The physical and mental calm of conscious strength which the most healthy natures experience is wanting, existence being impulsive, restless, tumultuous, feverish—a sort of border land between normal activity and the most temperate zones of inflammation.

In each of these cases of deviation from normal life the circulation of the blood is correspondingly modified: the small peripheral arteries terminating in the capillaries are unduly contracted or dilated, and the sanguineous currents in the larger vessels are retarded or flow onwards with increased velocity at the bidding of that nervous system which presides over the building up, maintenance, and repair of the whole organic structure. But there are strong reasons for believing that inflammation itself is nothing more than an excessive action of those forces the harmonious and temperate actions of which are the essential and principal constituents of healthy life. "Inflammation," Dr. Todd justly observes, "is a deranged nutrition. Like the normal nutrition, it involves supply and waste; and as the latter is considerable, the former is proportionably needed." Mr. Simon, in his masterly essay on inflammation, insists that "the totality of its phenomena constitute an exaggerated likeness of the ordinary process of textural nutrition." If, he says, the physical facts of inflammation "be stated in their most general form, with reference to the nature of their result, the entire process may be said essentially to consist in a *local change of material*. LOSS OF SUBSTANCE and REPRODUCTION OF SUBSTANCE are the simple totals into which, physiologically speaking, the details admit of being generalised; and especially it deserves notice that these two opposite actions are manifested thus simultaneously in the parts, so that at no stage of the disease is there any show of destruction without something of renewal at its side. . . . As regards the difference between these actions when they occur in health and when they occur in inflammation, the *appreciability of the opposed results* is in itself a differential mark of inflammation."

Assuming the truth of the foregoing statements, it is obvious that the greatest healing power which could be placed in the hands of physicians would be the power of increasing or decreasing the supply of blood to any given region of the body, of accelerating or retarding the circulation in it, and hence of intensifying or restraining those textural changes which are the condition of every organic function,

and the excessive slowness, rapidity, or irregularity of which constitutes disease. Drugs, judiciously prescribed, undoubtedly exert great power as curative agents; but how uncertain and unreliable in their action they are, and how impossible it is to limit their influence to the disease under treatment, is but too decisively attested, not only by the diametrically opposite opinions and wide-spread scepticism as to their value which during the present century has possessed the minds of many eminent physicians, but by the success which the practice of giving infinitesimal doses has met with, and, pre-eminently, by the inauguration, under the imposing title of *The Expectorant Treatment*, of the practice of giving *NOTHING*. By the most liberal computation, the number of specifics is lamentably small, and many physicians hold that there are none at all. Certainly there are none possessing the power of contracting or dilating the peripheral arteries, either of the whole body at once or of special segments of it separately. Bloodletting, formerly practised and devoutly believed in by almost every physician, has now justly fallen into discredit: almost all of the rising generation of medical men will live and pass away without witnessing that once universal operation, which, like violent purging, will undoubtedly lessen the currents of blood flowing throughout the body, and therefore to any given part of it, but only at the cost of a certain portion (and not seldom, as in the case of Cavour, of the whole) of the patient's life. Baths of various kinds are very effective in dispersing congestion; the Turkish bath is especially valuable in this respect; indeed, in the treatment of many diseases it is one of the most potent therapeutic agents at the command of the physician; but neither this nor any form of bath or application of water adopted by the hydropaths supplies the power of controlling the diameters of blood-vessels. The empirical application of the cold douche along the spine was, however, a slight tentative in the right direction, and its refreshing, invigorating influence heralded the full justification of its use which physiology now supplies. The complete anticipation, empirically, of what I have designated *Vaso-Motor Therapeutics* originated in Switzerland, where the guides, when exhausted by ascending the mountains, refresh themselves by putting snow in the nape of their neck;\* and further, in cases of extreme vascular excitement, cause the sufferer to sit with his naked back towards a large fire!† The

\* For the knowledge of this interesting fact I am indebted to my brother, who, May 1, 1864, wrote to me as follows:—"I intended to have mentioned before to you, that I noticed a circumstance in reading an account of the ascent of the Jungfrau by Agassiz and Forbes in 1841 bearing some relation to your ice cure. When within about 1000 feet of the summit, and surrounded by ice and snow, the guides put snow in the nape of the neck to refresh themselves, and some of the party imitated them."

† The truth of this remark is attested by the following letter, dated 18th of March, 1864:

"During a stay at Vevey, on the Lake of Geneva, in the summer of 1859, I made

physiological discovery, of which these practices are at once a remarkable foreshadowing and interesting confirmation, confers the power of increasing or decreasing the circulation of the blood in the different regions of the body, and therefore, as intimated above, places at the command of physicians a therapeutical agent thoroughly scientific in its *modus operandi*, capable of influencing the whole body at once, or any special segment of it only, applicable in the treatment of a larger number of diseases than any other remedy yet known, and, speaking generally, more efficacious as a curative agent, I venture to affirm, than all the medicines catalogued in the British Pharmacopoeia. That these are not the rash expressions of a sanguine enthusiast, but the sober statements of actual experience, I am prepared to prove by reference to a record of the treatment in question, and of its results in a great number and variety of cases.

Most of the readers of this Journal are probably already acquainted with the principles of the discovery in question, and with the methods

several mountain trips, and as one was attended with a circumstance illustrative of your theory of checking the circulation by the application of heat to the back, I venture to submit the particulars for your consideration. I started one fine morning, accompanied by a friend, to scale a neighbouring mountain ('Les dents du Montes'), about 5000 feet high. After a long walk to the foot of the mountain we commenced the ascent, which for the first 2000 feet is so extremely rapid that our road was not unlike a staircase. This perpetual ascending I found so fatiguing that it required the utmost urging, on the part of my fellow-traveller, to induce me to complete the first stage of our journey. We had decided upon a halt about half way up, in the highest situated cowherd's hut. I was more exhausted than my companion, owing, I presume, to the fact that ten years before this I had a very severe attack of rheumatism and inflammation of the pericardium, which left me the 'bruit' as a legacy so common to valvular diseases of the heart where lymph has been deposited. Quite exhausted and out of breath, I at last reached our halting-place. Here I determined to remain until my friend should have completed the ascent and should return for me. Our hosts, the Swiss cow-keepers, on noticing my extreme exhaustion, induced me to sit with my back close to the fire, which they prognosticated would soon restore me. Incredulous, though too tired to resist, I complied with their instructions, and in a short time I experienced great relief. I remained with my back to the fire till I was obliged to remove through the excessive heat, and in less than an hour I was so completely restored that I started with my companion, and was able to accomplish the rest of the journey with, comparatively speaking, greater ease than the first part. When we had again reached the bottom I resorted to the novel restorative of heating the back, and succeeded in arriving home, then nine miles further off, quite as fresh as my companion.

"Trusting you may deem these facts worthy of your attention, and assuring you of my readiness to answer any question that may occur to you,

"I beg to remain, dear Doctor,

"Yours very faithfully,

"R. F. DAVEY.

"P. S.—On reading my letter I fear I may not have stated with sufficient clearness the cause of my exhaustion, nor the effect produced by heating the back, and therefore beg to add that the exhaustion and shortness of breathing were caused by an excessively excited state of the vascular system, and that I was restored by the heat, from the fire upon the back, diminishing the frequency of the heart's action.—R. F. D."

of its application. They were announced in the 'Medical Times and Gazette' of July 18th, 1863, in an article entitled "A new Method of treating Disease by controlling the Circulation of the Blood in different Parts of the Body;" and were more fully explained in another article published in the 'Lancet,' June 4th, 1864, and entitled 'Vaso-Motor Therapeutics.\* It may be well, however, to recapitulate here certain leading facts described in those papers.

Through the researches of Professor Cl. Bernard, Dr. Brown-Séquard, and Dr. Augustus Waller, published in 1851-52-53, it was demonstrated that the sympathetic nerve controls the diameters of blood-vessels; that the paralysis, by section of the cervical portion of that nerve, was followed by an increased flow of blood and increase of vital properties in the side of the head and face to which the upper part of the divided nerve is distributed; and that galvanization of the cut end of the upper part is invariably followed by effects exactly opposite to those produced by its section—effects summed up by Dr. Brown-Séquard under the three heads—"contraction of blood-vessels, diminution of blood, decrease of vital properties." These two sets of phenomena having been found to be producible in all parts of the body through the agency of the nervous system, it was obvious that if that system could, without injuring it, be so influenced artificially as to produce these effects at will, a new and unspeakably important therapeutical power would be acquired. Profoundly impressed with this conviction, I occupied myself with the problem how such an influence could be exerted, and at length satisfied myself that the effects produced by section of the sympathetic could be obtained, though, of course, in a lesser but quite adequate degree, by the application of cold to the various segments of the spine; and that the effects produced by galvanization of the nerve could be likewise obtained by the application of heat to the same regions. Fortunately, the partial paralysis induced by this method is speedily remedied by the withdrawal of the cold, and the hyperæmia of the nerve is not less rapidly diminished by the withdrawal of the heat; so that by modifying the temperature of different segments of the back an effective control may be exerted over the peripheral arteries throughout the body without inflicting the least local or constitutional injury. As I have elsewhere stated, the *modus operandi* of cold on those nervous centres which preside over the blood-vessels, and its effects through their agency, is as follows:—  
"1st. It partially paralyses them. 2nd. By means of the partial paralysis thus effected, it lessens the nervous currents in the vaso-motor nerves emerging from the ganglia or nerve-centres acted upon and distributed to the muscular fibres surrounding the arteries in-

\* The first of these papers is reprinted in the appendix to my pamphlet entitled 'Functional Diseases of Women,' and the second forms the introduction to my pamphlet on sea-sickness.

fluenced. 3rd. By thus lessening those currents, it lessens the contractile energy of the muscular bands of the arteries to which those currents flow, and by doing so facilitates the dilatation of the arteries themselves. 4th. By thus inducing the condition of facile dilatability in the arteries acted upon, it enables the blood, which flows in the direction of least resistance, to enter them in greater volume and with greater rapidity than before.” And, conversely, when heat is applied :—“ 1st. The temperature of the sympathetic ganglia being raised, the flow of blood to them becomes more copious, and consequently their functions become more energetic than before. 2nd. Their nervous influence passes in fuller and more powerful streams along the nerves emerging from them, and ramifying over the blood-vessels which they control. 3rd. The muscular bands surrounding those vessels are stimulated by this increased nervous afflux to contract with more than their usual force, and so to diminish proportionably the diameter of the vessels themselves. 4th. The diameter of the vessels being thus lessened, the blood flows through them in less volume and with less rapidity than before ; indeed, it is probable that, while the nervous ganglia in question are made to emit their maximum of energy, many of the terminal branches of the blood-vessels acted upon become completely closed.”

If the sympathetic ganglia along the back can be thus influenced by modifying its temperature, the spinal cord must, *à fortiori*, be no less easily affected : it is so ; and now that I have proved, in opposition to the dictum of Dr. Todd, that cold applied along the back does *not* “ diminish both the force and frequency of the heart’s action,” I can state with the utmost confidence, the result of much experience, that for the successful treatment of the majority of that large group of maladies dependent on abnormal conditions of the spinal cord the directly sedative influence of ice applied along the centre of the back for considerable periods, or for short periods followed by the promotion of reaction, surpasses in value all other remedies put together.

After encountering great difficulties in devising a suitable method of applying ice along the back, I have constructed a bag which fulfils all requirements. It is made of india rubber, and consists of several compartments, usually three. For adults it is made about four inches broad, and of lengths, of course, suitable for each person ; the mouth is as wide as the bag itself, so that the ice can be easily put into it, and it is closed by an easily adjusted clamp, which makes the bag completely water-tight. For children and young persons bags proportionably narrower as well as shorter have been prepared, because it is necessary in all cases that the ice should extend but a slight distance laterally from the spine, otherwise the direct cooling effects would counterbalance or more than counterbalance the stimulating effects of the ice throughout the body, which are obtained through the agency of the vaso-motor nerves in the manner already

described. By means of the bag in question ice can be kept in apposition with all parts of the back, the patient being upright and able to walk about meanwhile, as the septa in the bag prevent the ice as it melts from falling from the upper to the lower part of the bag. When it is desirable to apply cold to one part of the back only, one only of the cells of the ice-bag need be filled. In some cases it is expedient to apply cold to the cervical and lumbar regions simultaneously, without acting at the same time on the dorsal region; then the top and bottom cells of the bag are used, the middle one being left empty. If it be desirable to circumscribe the area to which the ice is applied still more definitively than the method just indicated admits of, it is simply necessary to apply a second clamp to any given part of the bag; in this way the ice in each cell can be exactly limited to the extent needed.

If the ice is to be worn for a short time only—say from ten to thirty minutes—I usually order the patient to lie upon it, or to sit in an arm-chair having a high back, against which he presses and thus sustains the bag. If the bag is to be worn for considerable periods, as, for instance, in cases of sea-sickness, it may be kept in apposition with the back either by fastening the patient's clothes tightly round it or by means of tapes in the manner described in the printed directions supplied with each bag by the manufacturers and agents for their sale.

Practically, I find, as a general rule, that when ice is applied along the back in order to act upon the sympathetic ganglia, it may be applied over the spinal cord as well as on each side of it, without producing any unsatisfactory results, either directly upon the cord itself or indirectly upon any other part of the body. But, on the other hand, the application of heat along the spine, with a view to influence the sympathetic ganglia, is sometimes attended with unsatisfactory results—sickness, for instance; this being the case, I have been led to apply heat on each side of the cord, and as little as possible immediately over it, when desiring to contract the peripheral blood-vessels in any given part of the body. I have therefore constructed a hot-water-bag in order to carry out this method of application as far as possible. It consists of two cylinders of india rubber about one inch and a half in diameter when filled, and united together by a small tube at the top and bottom. The columns of water in the bag are kept at the requisite distance apart by strong intervening pieces of india rubber. The mouth of the bag communicates, of course, with each column, and is securely closed by a screw. The bags are made of various lengths, in order that various lengths of the spinal region may be acted upon, according to the requirements of the case under treatment. As, when this bag is filled, its columns become round, they come in contact with the back along two narrow lines only, at a little distance on each side of the spinal cord. There is a further

reason why it is desirable to apply heat in this manner. The object in applying heat being to contract blood-vessels, and thus at the periphery acted upon to diminish textural change, and therefore vitality, the less heat imparted to the blood at the parts directly acted upon consistently with the attainment of the object in view the better. It is obvious that, if heat were applied over a large surface of the back, it would so raise the temperature of the whole blood of the body that the contractile influence of the vasic nerves upon any special portion of the body would be either counterbalanced or entirely overcome. Of course, *mutatis mutandis*, the same remarks apply to the use of cold.

I must warn physicians intending to make trial of the method of treatment now described that the results of applying either cold or heat differ greatly in different individuals with respect to the extent and rapidity with which they are induced. Also, that in applying heat, water of a temperature of 115° Fahr. will prove as effective in one case as water at 125° or 130° in another. I find that a temperature of from 115° to 130° is, as a general rule, the most effective. In some constitutions the arteries of certain parts seem to have assumed such a persistent habit of contraction that their healthy dilatation is only accomplished after ice has been applied daily for many weeks; and, *vice versa*, the same observation is applicable to arteries which have had a long habit of undue dilatation. In some cases where the feet have been habitually and obstinately cold for a long period I have succeeded in inducing an adequate circulation in them within twenty-four hours from the beginning of treatment; in other like cases treatment during many weeks has been necessary to produce the same result. In cases of chronic headache due to cerebral hyperaemia I have generally found it necessary to apply heat during several weeks, although marked relief is generally given during the first day of treatment. In some rare cases, chiefly of uterine derangement, ice applied in the usual way fails entirely to induce an increase of circulation and consequent warmth in the peripheral parts intended to be acted upon. This is a remarkable fact, and difficult to account for; it seems to me not improbable that in such cases the ganglionic nervous centres must themselves be in a state of irremediable disease.

Though the readers of this review will, I presume, be especially interested in becoming acquainted with the power of influencing the cerebral circulation, and with the therapeutical results which experience has already shown to be desirable from that power, they will, I doubt not, be also glad to learn some of the practical consequences of its application to other parts of the body, seeing that there is scarcely any malady which by sympathetic or reflex action does not, in degrees more or less decisive, affect the circulation and consequently the health and functions of the brain. As an introduction,

therefore, to what I may have to say concerning the special treatment of brain affections, I shall premise some observations on the vaso-motor treatment of disease generally, adverting first to diseases which have no special seat, or which involve the whole body; and afterwards to those which are mainly restricted to special segments or parts of it.

The more diseases are studied with the intention of finding out what are their proximate causes the more indisputably, I believe, will the truth become established that the great majority of them may be generalised as phenomena which, though differing widely from each other in character, alike originate in abnormal functions of the nervous system; that those abnormal functions are of two kinds, the one excessive and the other defective evolution of nervous influence; that both these excessive and defective actions are, counting backwards, secondary phenomena proximately due in the one case to an excessive, in the other to a defective supply of blood in the nervous centres, and, more remotely, to a disturbance of the balance of those forces on which the afflux and efflux of blood in those centres depend.

If this statement is justifiable the most philosophical method of classifying the diseases to which the human body is liable is not less unlike any classification now extant than is the system of treatment here proposed unlike any hitherto adopted, in respect both to principles and practice. If, however, diseases in all parts of the body be referred to vascular disturbances in the nervous system as their proximate cause, any satisfactory classification of them according to their causal relations will, I fear, be exceedingly difficult, and probably, in the present state of our knowledge of the nervous system, impossible. The intimate blending of the cerebro-spinal with the sympathetic nervous system which obtains both at the centre and at the circumference precludes the hope, as it seems to me, that anatomy will ever demonstrate the exact relation existing between the several organs of the body and the cerebro-spinal and the ganglionic nervous system respectively. Where anatomy has been powerless, physiology and pathology have, however, often supplemented its defects by important revelations; and it may be that the time will come when, by successive contributions from each of these sources, our knowledge of the ramifications and functions of each part of the nervous system will be such as to render a thoroughly scientific classification of disease at once possible, and eminently practicable for the therapeutical purposes of the physician. Meanwhile it appears to me that the simple order in which the present distinguished President of the College of Physicians has treated of local diseases in his classic 'Lectures on the Principles and Practice of Physic,'\*

\* "If," he says, "I make one principle of arrangement more prominent than another, it will be that which relates to the anatomy of regions—the place and position of organs."

and which, notwithstanding its topographical rather than physiological character, commended itself to his instinctive sagacity, is not only for practical purposes the best, but, having regard to the segmental divisibility of the nervous system (practically of the ganglionic, and theoretically of the spinal), is, in fact, the nearest approach possible at present to a truly scientific arrangement. Hence, after referring to certain maladies which have no special seat or which afflict the whole body at once, I shall advert rapidly to those affecting special parts of it in the order adopted by Dr. Watson, viz., that of beginning with diseases of the upper part of the body, and thence descending to the lower extremities. But while adopting this method, I shall for the present avoid any special reference to the treatment of cerebro-spinal diseases by modifying the temperature of the back, as I propose to discuss this part of the subject in a separate article, after completing the preliminary survey here presented.

I must, however, in the first place, point out the necessity of always bearing in mind the twofold and essentially distinct results which are produced by either raising or lowering the temperature of the several segments of the spinal region. By raising the temperature both the spinal cord and the ganglionic nervous centres acquire, of course, an additional supply of blood; but while the vascularity, and therefore the vitality, of the peripheral parts related to the spinal segments acted upon is diminished, their immediate functional activity, in so far as that activity is dependent on the cerebro-spinal system, is increased. For example, the act of vomiting, which is dependent on that system, may be induced by increasing the amount of blood in the spinal cord, although the organs concerned in affecting that act are at that very time receiving a less supply of blood than they usually do. On the other hand, by applying cold to the spinal region, and thus lessening the amount of blood in the spinal cord and in the collateral ganglionic nervous centres, a sedative influence is exerted upon the peripheral organs related to the spinal segments acted upon, although those organs are rendered hyperæmic meanwhile. Thus, the stomach, when excited to vomiting, and the muscles conspiring to affect the act, may be soothed into quiescence, notwithstanding that simultaneously an undue afflux of blood is made to circulate in them.

HYPERTÆMIA and CONGESTION, in all their various grades of intensity, and occurring in any part of the body except in the spinal cord and collateral ganglionic nervous centres, may be most successfully treated by means of the warm-water-bag applied to the appropriate parts of the back.

INFLAMMATION, which has been already spoken of "as an exaggerated likeness of the ordinary process of textural nutrition," may, like hyperæmia and congestion, be powerfully controlled in the same manner. I have already published evidence that heat, properly

applied to the back, will cause the pulse to fall, and I am enabled to add the assurance that it will render a dry feverish skin moist and cool. In cases of inflammatory or irritative fever this method of treatment offers peculiar advantages, because the heat can be so applied as to lessen the flow of blood to the seat of inflammation, and thus the *cause* of the accompanying feverishness may be lessened, if not completely subdued, its effects being simultaneously counteracted.

DISEASES OF THE SKIN, not due to organic poisons, may be treated advantageously, I doubt not, through the agency of the dorsal nervous centres. That many of these affections are due seems to me probable, *a priori*, to excessive or defective circulation of blood in the cutis, and that this circulation, as well as the activity of the sweat-glands, can be modified, I know by experience. Anæmia of the skin is itself a distressing affection, especially by the sensation of extreme coldness which it occasions. Sometimes this affection is also accompanied with a strong predisposition to spasms in various parts of the body, and notably to cramp of the muscles of the legs during the night. These phenomena are indubitably referable to hyperæmia of the nervous centres along the back, and are wholly remediable by the application of ice. Paralysis of the sensory nerves in various parts of the body is often due to inadequate circulation of blood in the skin ; this occasions, of course, imperfect oxygenation of the nervous as well as the other tissues. In these cases an increase of the circulation, effected by the application of ice, will restore normal sensibility. By the same means I have found that a large open sore, which for months had made no progress in healing, was made to heal with remarkable rapidity, and I feel assured that a large number of skin diseases, comprising various eruptions and indolent ulcers, will be found to originate in cuticular anæmia, and that they will be cured by increasing the surface-circulation.

Cases not unfrequently occur in which there is great sanguineous determination to some part of the surface of the body, other parts being simultaneously deprived of their normal quantity of blood ; if this local afflux exceeds certain limits, disease occurs. The following is a case of this kind. C. E—, a young lady nineteen years of age, began to be troubled when about thirteen, with extreme scurfiness of the head ; this was followed by an eruption behind her ears, which soon extended all over her head, and which, with occasional intervals of subsidence, continued until her mother consulted me concerning her, in December, 1863. At this date the eruption covered the scalp, extended down her neck between two and three inches, beneath and in front of her ears, and round her forehead near the hair. The whole head was covered with large scaly scurf, underneath which the skin was very red and tender. The skin was broken in many places, and serum oozed copiously from them. The eruption was

worst near the ears and forehead ; the centre of her face was free. She had also a few small boils on her body, chiefly on her arms. She suffered much from headache and cerebral oppression, also from a feeling of tightness in the head, and *her head was always hot*. When the eruption was most extensive and most active the cerebral symptoms were least intense ; they were most so when preluding menstruation, when she was fatigued, and when she had sat up late the previous night. She was habitually "very chilly," and would be healthier, her mother thought, in a warm climate, as she was usually better in summer than in winter. Her extremities were exceedingly cold ; "her fingers die frequently," her mother said, "when other people do not feel it cold at all ; and she suffers much from cold feet at night, as well as by day." She was "easily tired, often coming in exhausted and with headache, though her walk was short." Pulse laboured, and varying from 60 to 75 per minute, generally 60 in the morning. Her menstrual periods usually recurred about every five weeks, but occasionally she missed a period altogether. They lasted about four days ; discharge scanty. Her tongue was slightly furred ; her appetite, never very great, was much impaired. She often felt sick ; her bowels were open daily, but inclined to be constipated. My treatment consisted in the application of ice in the two lower cells of the spinal ice-bag daily, during several weeks. The eruption disappeared ; the headaches ceased ; her fingers ceased to "die ;" her extremities became naturally warm ; her menses became more frequent and more copious ; she no longer felt sick, and her appetite and general health simultaneously improved.

Of course I might have lessened the determination of blood to the head more rapidly by applying heat to the cervical and upper dorsal region ; I preferred, however, what seems to me the more philosophical though slower method of increasing the circulation of the blood in the other parts of the body, and thus of *deriving* it from the head by means of ice applied as described. Those hyperæmic states of the skin, which are so extensive as to render their treatment by means of heat to the spine desirable, will be more appropriately adverted to when I speak of the treatment of fevers.

*Burns and Scalds*, when sufficiently extensive or severe to produce constitutional excitement and to cause inflammation of the bowels, the brain, or other internal parts, through the reflex action of the spinal cord and collateral ganglionic nervous centres, may be treated with great benefit by means of ice. It will act beneficially in two ways at the same time—it will lessen the pain of the injured part by lessening the hyperæsthesia consequent on the crowd of irritating impressions which are transmitted from the seat of injury to the nervous centres, and which but for the ice would occasion a preternatural afflux of blood there ; and, by preventing that afflux, it will

prevent those undue reflex actions which, by propagating the effects of burns to internal organs, is often the cause of death.

FEVERS of all kinds and grades will, I venture to predict, be so effectually treated through the agency of the nervous centres that this method will ultimately supersede all others. Of course the poison inducing certain forms of fever cannot be neutralized by restraining or accelerating the circulation; but neither is it neutralized by any method of treatment now adopted. The treatment of each kind and stage of fever by modifying the temperature of the back must be guided by the general principles already announced. During the cold stage of every fever ice should be applied continuously along the back from the upper cervical to the lower dorsal vertebrae, until the circulation throughout the surface of the body is re-established. When the hot stage sets in heat must be applied in the same manner, to the same extent as was ice during the cold stage, and should also be continued until the fever is subdued.

*Typhoid, typhus, and yellow fever*, in so far as their peculiar complications are concerned, will need to be treated by special applications of heat and cold to special segments of the back. For example, when the inflammatory force expends itself, especially in the head, heat ought to be applied to the cervical and upper dorsal region so long as the head continues preternaturally hot; and, on the contrary, if the circulation in the head should become unduly languid, the head being correspondingly cold, ice should be applied to the parts just mentioned. If, as in typhoid fever, the abdominal viscera should be the chief seat of suffering, applications of cold or heat should be made to the dorso-lumbar region, on the general principles just mentioned.

The EXANTHEMATOUS FEVERS, including ERYSIPelas, will, I anticipate, be in like manner treated with success, while their frequent and distressing attendant, vomiting, may be effectually restrained. But in the treatment of scarlet fever it occurs to me to suggest that a very dangerous and often fatal complication of that disease, namely, inflammation of the kidneys, may be completely averted by the application of ice directly over the kidneys, the ice-bag being placed across the back so long as there is any evidence that those organs are in danger.

There is a form of fever, known on the Continent as *la fievre algide*, which shows itself with especial frequency on the south coast of the Mediterranean, and which is remarkable for the long continuance of the cold stage—in other words, for the persistent spasmotic contraction of the peripheral arteries, and hence, from the consequent coldness of the patient, the name, *algide fever*. I feel quite sure that the peculiar symptoms of this malady will be rapidly and entirely subdued by judicious use of ice along the spine. In fact, this disease is, I believe, in respect to its cause, closely akin to

cholera, which I have elsewhere stated is in my opinion due to what may be tersely described as a sun- or heat-stroke along the back. This awful scourge is characterised, however, by numerous and important complications, which may not at first sight seem referable to the cause alleged, and is far too large a subject for discussion here. I am satisfied, however, that I shall be able to show that all the symptoms of cholera can be adequately accounted for by the hypothesis I have suggested, and that the only philosophical and successful treatment of cholera until the period of reaction sets in will consist in the application of cold along the spine.

CHEST AFFECTIONS I have found may be treated by modifying the temperature of the spinal region with astonishing success. *Pleurisy* I have already referred to in my pamphlet 'On the Functional Diseases of Women' as follows :—"I have recently treated a case of pleurisy by means of heat applied continuously between the scapulae, the result being a wonderfully rapid subsidence of the inflammation, a corresponding diminution of the pain felt during inspiration or pressure over the affected part, a remarkable sensation of comfort, complete freedom from headache (the patient had previously suffered extremely from pain in the head, and had been delirious at night), several hours' sleep each night after the heat was first applied, a rapid cleaning of the previously furred tongue, a change in the urine from the high colour of inflammation to the paler hue of health, and within three days a fall of the pulse from 90 to 62. The only medicine taken was an aperient pill."

A frequent precursor and common accompaniment, and, I may add, as I believe, the proximate cause, in many cases of consumption is *pulmonary congestion*, which is induced in a variety of ways, but most generally, in my opinion, by mental depression. This congestion, by impeding the free passage of the blood through the lungs, necessarily retards its movement in all parts of the body, and notably in the head. Dull, aching pain, not only of the head, but in the limbs, is often induced by this partial stagnation, and in cases where the cerebral circulation is peculiarly liable to disorder pulmonary congestion often produces brain affections more or less grave, ranging from an ordinary headache to delirium. In these cases the application of the warm-water-bag already described between the scapulae, will contract the pulmonary vessels, reduce the congestion, and most generally completely disperse all the unfavorable symptoms which the congestion had caused.

*Inflammation of the Lungs* I have not yet had an opportunity of treating by this method. It is certain, however, that if pulmonary congestion can be subdued by it with any approach to the effectiveness I have alleged, the application of heat in the early stages of pneumonia will be found the most powerful counteractive of the disease. I predict the success of this treatment of pneumonia

with the more confidence, seeing that the advantageous parts, at least, of the results obtained in the treatment of pneumonia by tartar-emetic are also obtained by the application of heat, namely, perspiration, expectoration, nausea, and even vomiting. I apprehend that in the later stages, when consolidation has taken place and the reparative efforts of nature are directed to the resolution and absorption of the effused products, the application of ice will then be found the most potent aid.

*Pulmonary Apoplexy*, so called, and *Pulmonary Hæmorrhage*, the frequent results of congestions, which in the earlier stages might, as I have affirmed, be easily overcome by the judicious application of heat, may themselves be treated with the greatest success by modifying the temperature of the back. In both cases the careful superintendence of the physician would be especially necessary. In pulmonary apoplexy its chief object, of course, is to favour the dispersion by expectoration or absorption, or both, of the effused blood, and I have found that this is best effected by the alternate application of cold and heat, great caution being exercised in the application of cold, lest further congestion should be induced. By this alternate method the vessels are made to contract and dilate, and thus to promote movement in the affected part. While ice is applied greater circulation, and therefore more rapid absorption, is likely to occur; and, on the other hand, while heat is applied the mucous membrane of the bronchial tubes secretes more copiously than usual, and thus greatly facilitates the expectoration of any sanguineous elements which may be exuded into the air-cells or minute tubes. Pulmonary hæmorrhage into the air-cells and bronchial tubes only, which I believe is a common occurrence quite independently of the presence of tubercle, is in all its stages best treated by heat only; when it only threatens, a sense of suffocation having been induced, the remarks already made on pulmonary congestion of course apply to it; if blood is being actually thrown up the bleeding will be most rapidly restrained and its recurrence most effectually averted by the application between the scapulae of the hot-water-bag, which will at the same time, as already stated, facilitate the expectoration of the dead blood already effused.

*Hæmoptysis* of the ordinary kind, in which the sputa is little more than tinged with blood, commonly denotes active pulmonary disease, although doubtless in some cases it merely results from an unhealthy and usually passive congestion of the bronchial mucous membrane. From whichever of these two causes the hæmoptysis may proceed, it will, I believe, be most successfully treated by inducing greater vitality in the diseased parts. This can be most effectually done, of course, by increasing the circulation in them, especial care being exercised, however, meanwhile to avoid inducing active congestion,

or inflammation by the remedy employed, and to subdue them by the use of heat if they should exist or supervene.

*Consumption*, in its successive phases, may, I feel assured, have its march greatly arrested, and its symptoms palliated, by modifying judiciously the temperature of the back. How far such curative influence, melioration, or palliation, will be possible can, however, only be determined by extensive experience and investigations still to be made. But what I have already said of the treatment of chest affections plainly indicates that much may be done; and as bronchitis is one of the most constant accompaniments of phthisis, and very often the immediate herald of death from this disease, I am sanguine that, by subduing its action in the manner hereafter mentioned, life may be frequently and considerably prolonged in cases which otherwise would have a much more rapid termination. In the progress of consumption there are at least three aspects in which congestion presents itself as a troublesome accompaniment, and not seldom one of the most important features of the disease. The first is pulmonary congestion over a considerable area, often induced, as I have already intimated, by mental depression, and constituting, in the first instance, the only abnormal state of the lungs, but too frequently acting as the introducer of consumption by supplying the most favorable condition for the deposit of tubercle. The second form of congestion is muscular, and pervades the muscular tissue surrounding the chest. It is generally most marked in the muscles of the back, especially in those clothing the scapulae, in the subscapularis, probably, most of all. The tenderness and pain so often experienced when percussion is made beneath the clavicles is in many cases due to congestion of the muscles immediately beneath the skin of the part in question. The amount of physical suffering, and of fear that the pulmonary tissue may be seriously diseased, which this muscular congestion occasions, is very great, and its removal, by raising the spirits of the patient, contributes immensely to arrest the progress of actual disease in the lungs if it should have already set in. The third kind of congestion referred to is that occasioned by the irritating action of tubercular deposits, and which itself is the frequent cause of bronchitis. Now, all these forms of congestion can be either entirely subdued or kept in such decisive subjection as in a very great degree to avert their evil consequences by the application of heat along the dorsal region. Moreover, coldness of the feet, a common accompaniment of the consumptive tendency, may be overcome meanwhile by applications of ice once or twice a day to the lumbar region; and coldness of the general surface of the body, also a common accompaniment of this malady, may be remedied by the tonic effects of ice used along the entire back for very short periods only, in order that determination of blood to the lungs may

not be thereby increased, and the special action of heat applied between the scapulae during considerable periods daily may not be interfered with. Indeed, I may observe here that when ice is applied along the whole length of the spinal cord its tendency is to equalise the circulation over all parts of the body; that, therefore, in a case of slight cerebral or pulmonary congestion, when it would be unsafe to apply ice to those segments of the back only, the sympathetic ganglia of which are related to the brain and lungs respectively, ice may nevertheless be applied along the whole spinal region with safety, and that not unfrequently slight degrees of local congestion may thus be advantageously treated without the necessity of applying heat at all to those nervous centres specially related to the congested part. In the treatment of consumption by the methods here indicated I believe that, while carefully meeting each special symptom by special applications of heat or cold according to the general principles I have laid down, the physician may impart tone and strength in a surprising degree to his patient by the regular application of ice along the whole spinal cord, during a suitable length of time, once or twice a day.

*Bronchitis* yields with remarkable facility and rapidity to treatment through the agency of the dorsal nervous centres. In the early stages the only treatment required is the application of the double-columned water-bag, medium size, at a temperature of about 120° between the scapulae. The water in the bag should be renewed from time to time as its temperature falls to that of the body, and the application should be continued so long as bronchial irritation is experienced. It is especially desirable that the bag should be applied when the patient goes to bed, and on this occasion the upper end of the bag should be placed so high as to come in apposition with the lower cervical vertebrae. Thus applied, the bag will not only allay the bronchial irritation and consequent cough, but will induce sleep. As I have said, when speaking of fever, the feverish dry skin will become cool and moist, a general feeling of relief and comfort being simultaneously experienced. During the first stage of bronchitis the bronchial mucous membrane is congested and dry, the patient coughs without being able to "bring anything up," and feels as if he should be relieved if only he could expectorate. On the same principle, and, I believe, by the same agency as that by which the skin becomes moist under the influence of heat applied to the back, the bronchial mucous membrane exudes its appropriate secretion, and often within half an hour after the first application of the warm-water-bag between the scapulae bland bronchial secretion is induced, to the great astonishment and relief of the patient; and thus all the beneficent, without the poisonous, effects of tartar-emetic are obtained. By persisting in this method of treatment for a few days formidable cases of bronchial inflammation may be wholly

subdued, and in many instances a constant and violent cough is completely cut short within the first few hours of treatment.

When bronchitis has advanced to that stage in which the secretion of mucus is very copious, its abundance having become the chief source of trouble, and the necessity of discharging it from the lungs the chief cause of the continuance of the cough, it will be found that ice applied along the back will restrain secretion, give tone to the enfeebled bronchial tissues, and enable the seemingly partially paralysed lungs, loaded with mucus, which is producing a sense of suffocation, to relieve themselves of their contents far more effectually than is possible by any other method. In these cases the muscular fibre surrounding the bronchial tubes have, probably, become enfeebled by deprivation of their wonted supply of blood, and hence, unable to continue with their accustomed vigour those vermicular actions of the small bronchial tubes on which their power of relieving themselves of undue quantities depends, partial, and too often complete, suffocation ensues.

I have tried the treatment here explained in numerous cases of the first stage of bronchitis, and with such success as to preclude me from having the opportunity, in most instances, of trying the efficacy of ice in the later stages of the disease; but in these stages I have had sufficient experience to warrant the statements just made. I recommend, when bronchitis is treated by means of the hot-water bag, that great care be taken to keep the patient warm, as the tendency of the heat to the back is not only to lessen the circulation in the bronchial arteries, but also in the surface of that part of the body related to those nervous segments acted upon. The different degrees in which the feeling of cold is experienced by different patients is great, some complaining of it especially, some not at all; but in all cases it is well to provide against the chances of lessening perceptibly the surface circulation, and the best way of doing this, when the patient is in bed, is to put a blanket, shawl-like, round the shoulders, the water bag being within it. The temperature of the bag will thus be sustained much longer than otherwise, the patient being kept warm at the same time.

I may observe here that the circulation, and therefore development, of the mammae may be influenced by application of heat or cold between the scapulae, and that I have given evidence of this at page 38 of my pamphlet on 'The Functional Diseases of Women.' I have reason to believe that by this method the secretion of milk may be increased or retarded. In one case, in which the breasts were unduly distended with milk, and very painful, I succeeded, by applying the warm-water bag between the scapulae, in giving such relief as to justify me in hoping that much good may be done in this way. In treating the case in question I used water at a much higher temperature than, as experience has since taught me, was expedient, otherwise the effects would probably have been more

marked even than they were. The subject is worthy of thorough investigation, and I trust that those who have special opportunities of prosecuting it will be enabled to confirm my conviction that the various affections of the mammae, including inflammation which are often especially troublesome to women after confinement, may be remedied in a greater degree, and with greater certainty than hitherto, through the agency of the dorsal nervous centres.

I have only room here to record the treatment of one case of bronchitis, and that in the first stage of the disease, by the method now described. Mrs. H., age about fifty-five, consulted me February 12th, 1864. She complained of incessant cough day and night, often becoming violently paroxysmal, and so troublesome that she not only passed the nights without sleep, but was obliged to sit up in bed a considerable part of the time. She felt extreme tightness of the chest. There was scarcely any expectoration, the pulse was full and very rapid. I did not note its rate. I ordered a warm-water bag, medium size, to be applied between the scapulae and on each side of the lower cervical vertebrae at bed time, and to be renewed during the night if the cough should trouble her or if she should wake, and to be applied several times during the day between the scapulae only. Immediately after the first application at night the patient fell asleep; she awoke only once during the night, when the water in the bag was renewed; she speedily fell asleep again, slept until morning, and, as she assures me, did not cough once throughout the night. The treatment was continued only partially during the following day, and at night the bag was applied only once, at bed-time. The patient was, nevertheless, wholly relieved from cough, and slept all night. Though the treatment in the day-time was afterwards still further relaxed, and though each night the bag was used only once, within six days from the date of the first application, and without having taken any medicine, the patient declared herself quite well.

*Whooping Cough* has certain remarkable affinities with bronchitis; but while the latter is mainly an expression of abnormal conditions of the ganglionic nervous centres, the former is probably referable chiefly to abnormal excitability of the medulla oblongata and spinal cord. Holding this opinion, I expect that *when the malady has fully developed itself*, ice along the spine and across the base of the skull will prove beneficial. But in the preliminary stage heat along the whole dorsal region, as, in the first stage of bronchitis, heat between the scapula, will probably give most relief. I should, however, until experience teaches me otherwise, keep ice, even during the first stage, across the base of the skull.\*

\* Since writing this paragraph I have treated a case of whooping cough. The patient, a boy, fifteen months' old, had suffered so much during the fortnight before I saw him, that both he and his mother had been almost wholly deprived of sleep. Wheezing and mucous râles pervaded the whole of the back of both lungs. Excepting one fit of coughing, the child slept throughout the first night

*Asthma*, in the only case (an old and very severe one) in which I have tried to influence it through the dorsal nervous centres, was wonderfully relieved for some time; and in a case of *Spasmodic Cough* very like asthma, which came on frequently at night in violent and long-continued paroxysms, and which had distressed and seriously impaired the health of the patient by depriving her of sleep, I effected a complete cure by applying a narrow strip of cold *along the vertebral spines only, and only during the paroxysms*.

THE LIVER may probably be influenced by the therapeutical method in question, inasmuch as the stomach is amenable to it in an extraordinary degree, but I possess no evidence bearing on the point.

THE PERITONEUM, and therefore inflammation of it, can doubtless be affected beneficially through the agency of the nervous centres: this statement is justified by the facts that pleurisy and functional diseases of the organs in the abdominal and pelvic cavities can be thus affected; but, as yet, I have had no opportunity of treating peritonitis by means of heat applied on each side of the spine.

STOMACH AFFECTIONS can, I have found, be so influenced through the agency of the nervous centres along the back that this discovery alone will constitute a memorable epoch in the development of medical science. I have reason to believe that when heat is applied to the lower part of the dorsal, and to the lumbar region, there is a preternatural amount of mucus secreted in the stomach as well as in the bowels, in like manner as this secretion in the bronchial tubes is stimulated by heat applied between the scapulæ, and that the presence of this abnormal amount of mucus in the stomach is the proximate cause of nausea. I presume that this effect is induced by the immediate action of heat on the sympathetic ganglia on each side of the spinal column, and that the hyperæmia thus affected in them is propagated by their heightened activity along the splanchnic nerves to the solar plexus, and thence to the stomach. If heat be applied continuously, not only as just stated, but also along the whole dorsal region, the nausea already induced will often be followed by vomiting, which is, I believe, mainly due to hyperæmia thus caused in the spinal cord, the excito-motor functions of which are consequently intensified. Assuming the correctness of these views, it will be at once obvious that nausea and vomiting may be restrained and almost always completely stopped by ice applied along the appropriate segments of the back. It is also intelligible how, if from any cause, as for example, disease in remote organs, or exciting impressions from an irritated or pregnant womb, the spinal cord should be rendered hyperæmic by the reception of impulses in of treatment. It slept frequently during the following days, and excellently each succeeding night; the cough became rapidly slighter, and less frequent; within four days the wheezing and râles wholly ceased; and though on the sixth day, the day of writing this, the cough has not absolutely ceased, it is so slight that it has ceased to give any serious trouble.

unwonted numbers, and with unwonted intensity, it will transmit motor impulses to the abdominal viscera, and to the stomach especially, to such an abnormal extent as to cause functional diseases or derangements of those organs. It is not less intelligible that in all such cases, whatever may be the primary cause of these functional disturbances, ice applied along the back by counteracting their proximate cause remedies the affections themselves. Moreover, as the most frequent forms of indigestion are due to a want of tone, as it is called, in the stomach, that is, to a want of nourishment of that organ, and as ice applied as stated will, while removing the conditions of nausea, increase the gastric circulation, it necessarily improves the digestive power. In my pamphlet on 'SEA-SICKNESS, its Nature and Treatment,' I have given abundant evidence of the efficacy of this remedy in that universal and hitherto incurable affliction. A malady, akin to sea-sickness, but occasioning greater because more prolonged suffering, and from which few of the "better half" of the human race escape, namely, THE SICKNESS OF PREGNANCY, and for which no successful remedy has hitherto been known, can also be controlled to a wonderful extent in the same manner on the same principles as sea-sickness itself. In my pamphlet on 'The Functional Diseases of Women,' published in December, 1863, I predicted this result: in May, 1864, I had for the first time the satisfaction of verifying it in a case of the most extraordinary severity. The lady in question had previously had seven miscarriages, generally after "quickeening," she had also had four children, three, at least, of them being born at the seventh month; the seven miscarriages and the three premature births were all due to the excessive straining of sickness, which began at the time of conception, and steadily increased until delivery. At about the fourth month blood was usually mixed with the ejected contents of the stomach. By the use of ice this patient was relieved of nausea, was enabled to retain her food, and on occasions when it was ejected she was wholly freed from the retching and straining which in former pregnancies had so distressed her, and was enabled to carry her child to the full term. Other experience of the treatment of this malady leads me to hope that women may now be relieved of the dreadful suffering which it has so long and so generally inflicted upon them.

In a case of *organic disease of the stomach*, I have found that the consequent vomiting could be greatly restrained, and digestion rendered possible by ice along the back; and, as intimated, I have in many cases remedied various degrees of nausea and indigestion by the same method. I confidently anticipate that symptomatic vomiting in all cases of either constitutional or local disease will be restrained or subdued in the same way.

BOWEL AFFECTIONS may also be undoubtedly influenced bene-

ficially through the agency of the nervous centres along the back. There are two sources, at least, of nervous influence, and probably three to which the bowels are subject : first, that of vaso-motor nerves by which their nutrition is modified ; second, that of the excito-motor nerves by which their vermicular contractions are affected ; and third, probably that of special nerves presiding over their glandular system, and by the stimulus of which mucus is secreted. If so, constipation may depend on inadequate nourishment of the muscular wall of the intestine, on inadequate supply of motor power from the nervous centres, or, finally, on inadequate activity of the intestinal, including the mucous, glands. In the first case it is presumable that ice applied along the back would increase the circulation in the intestines, and thus remedy the constipation. In the second and third cases heat applied in the same manner should be not less beneficial. Of course, presuming the truth of the hypothesis as to the causes of *constipation* to be what is here stated, a correct diagnosis between them is extremely difficult, perhaps impossible. Hence it is, I believe, that while I have succeeded in overcoming habitual and obstinate constipation of long standing in many cases by the application of ice, I have not less signally failed in others in which the same treatment was adopted. That ice is, however, a very potent and successful remedy for many cases of constipation where all medicines have failed, my experience has indubitably proved. Moreover, in cases of very troublesome and obstinate *abdominal flatus* I have found it a valuable remedy ; in such cases there is probably slight paralysis of the bowels, and I think that the beneficial influence of the ice is due to the increase which it effects in the circulation of the muscular coat of the intestine.

*Diarrhoea and Constipation.*—Diarrhoea is, I am of opinion, caused through the agency of the nervous system, namely by one set of nerves, the excito-motor, and is facilitated by certain conditions of the vaso-motor, and by those which preside over the intestinal secretions : if so, it is readily conceivable how any remote causes so acting upon the nervous centres which control the actions of the bowels as to render those centres hyperæmic will give a sudden and powerful increase to the contractile energy of the bowels, and thus cause them to pass along and expel their contents with abnormal rapidity. I have explained in my pamphlet ‘On Sea-sickness’ how, on this principle, the diarrhoea often associated with that malady is induced. Fright and other mental shocks, as is well known, not seldom occasion an attack of diarrhoea ; various affections of the nervous system, including those due to the irritation of teething, will do the same. The ordinary summer diarrhoea of temperate climates, and those choleraic forms of the malady in warm climates which do not attain to the full development of cholera itself, are all, I believe, of the type first described. I feel confident that summer and

choleraic diarrhoea are due to the preternatural temperature and consequent hyperæmia of the dorsal and other nervous centres related to the bowels induced by the greater heat of the sun during summer in temperate climates, and that *cholera* itself is only a further development of those maladies, and is due to an intensification of those hyperæmic conditions just mentioned. The more all the features of this formidable malady are considered the more clearly will it be seen how wonderfully explicable they are by the hypothesis here advanced.

When the excito-motor nerves presiding over the actions of the intestines are in a state of abnormal activity so likewise are those on which the activity of the intestinal glands depends; hence the flux which usually attends abnormally intense vermicular contractions of the bowels. Such contractions do not necessarily presuppose an abnormal afflux of blood to the muscular coat of the canal; but, on the contrary, there is good reason for believing that those vascular conditions of the enteric nervous centres which occasion superabundant intestinal secretions, and preternaturally intense vermicular contractions are accompanied with like conditions of the vaso-motor nerve centres, and consequently there is at these times a minimum quantity of blood in the intestinal arteries. This consideration makes plain how it is that constipation so frequently follows diarrhoea. If these views be correct, the application of ice along the dorsal and lumbar region should restrain those abnormally rapid vermicular actions and superabundant intestinal secretions the co-existence of which constitute diarrhoea, and should at the same time increase the afflux of blood in the muscular coat of the intestine, and thus diminish that anaemic excitability which, as in the case of other organs, and notably so of the brain, is a favorable condition of perverted action. These theoretical views are fully justified by my experience. In my pamphlet 'On Seasickness' I have mentioned cases in which the diarrhoea sometimes associated with that malady was wholly subdued by the application of ice, and I have successfully treated summer diarrhoea, and infantile diarrhoea occurring during dentition by the same method. It thus becomes intelligible how it is that while ice acts as described in restraining diarrhoea originating as explained, it increases the nutrition of the muscular coat of the intestine, and hence, in those cases of constipation dependent on enfeeblement of that coat, cures the malady. These views receive further confirmation from the interesting fact that I have been in some cases compelled to cease the application of heat to the lumbar region when it had been prescribed for menorrhagia, because in these particular cases it produced constipation in the bowels. As it is conceivable that constipation may also originate in inadequacy of the intestinal mucus, and in impairment of the excito-motor nerve centres presiding over

intestinal action, it seems to follow logically that the application of heat in such cases would prove beneficial. As already observed, however, the diagnosis between the different forms of constipation here adverted to is extremely difficult, if not impossible, and as yet I have had no case in which I have been tempted to try the effects of heat.

DISEASES OF THE PELVIC VISCERA can be influenced not less beneficially than the thoracic and abdominal by modifying the temperature of the appropriate part of the spinal region. In my pamphlet on 'The Functional Diseases of Women' I have given many cases in which the uterine functions have been thus influenced. I have shown that ice applied along and on each side of the lower dorsal and the lumbar vertebrae will conduce to menstruation, will often produce it, will increase its copiousness, and will annul the suffering which frequently accompanies it; also, conversely, that heat similarly applied will restrain or arrest it. It is scarcely necessary to observe that in thus influencing the menstrual functions the most extreme sceptic may become convinced of the validity of the therapeutical power here described. I have had abundant evidence that the male reproductive organs may be influenced in like manner no less certainly and beneficially, and that precisely those functional maladies of these organs which withstand ordinary medical treatment most obstinately are those which are controlled most easily by treatment according to the principles now enunciated.

*Paralysis and spasmodic irritability of the muscular parts of the bladder* I have in like manner completely cured in many cases; those of which I have had most frequent experience are cases of partial paralysis due, I doubt not, to inadequate nourishment of the muscular wall, and cases of imperfect retention due, I believe, to abnormal intensity of the excito-motor functions of that segment of the spinal cord on which the contractile impulses of the viscera depend.

I have also found that conditions analogous to each of those just mentioned as existing in the bladder not unfrequently obtains in the rectum, and that these conditions are remediable in the same manner as are those of the bladder; moreover, I have in some cases found that haemorrhoids may be lessened or abolished by the application of heat in the lumbar region.

THE CIRCULATION OF BLOOD IN THE LOWER EXTREMITIES may be powerfully influenced by modifying the temperature of the lumbar region; for evidence of this fact I beg to refer to sect. iii. of my pamphlet on 'The Functional Diseases of Women,' entitled "Coldness of the Feet, its relation to Functional Diseases of the Womb, and its Cure by means of Ice."

No physician reviewing the numerous and important maladies which I have now affirmed to be amenable to the method of treatment in question, can fail to recognise the immense therapeutical aid which that method will confer upon him in the treatment of mental affections; for, indeed, what disease or functional derange-

ment of any part of the body does not disturb more or less the circulation and functions of the cerebro-spinal axis, and therefore the health of the mind. And how much more is this the case in persons already predisposed to mental disease? The cerebral functions are speedily impaired by impairment of the functions of the lungs. I have frequently seen the production of mental aberration by a fit of persistent coughing or of vomiting. Fits of epilepsy often originate in abnormal conditions of the abdominal viscera, still oftener in ovarian or uterine derangements, and are certainly greatly favoured, if not ushered in, by spasmodic contraction of the blood-vessels of the lower extremities. Functional derangements of the brain ranging from the slightest headache to the gravest affections in which cerebral anaemia or cerebral congestion exists in an extreme degree, are also, as is well known, often induced by deficient or perverted action of the alimentary system. Indeed a volume might be written upon the causal relation between the various diseases to which the several segments of the body are subject, and the diseases of the brain. This consideration justifies me, I hope, in having occupied so many pages of this journal by the foregoing exposition as an introduction to what I have to say on the treatment of cerebral affections by the method now briefly expounded. In the next number of this review I propose to discuss the applicability of this method to the treatment of those affections, and to illustrate my observations by a reference to cases in the treatment of which that method has been applied.

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*Artificial Insanity, chiefly in relation to Mental Pathology.* By  
DANIEL HACK TUKE, M.D., formerly Visiting Medical Officer  
to the York Retreat.

It will not, I think, be disputed that, in an investigation into the nature or pathology of any disease, some light may be thrown upon it by producing a similar disease artificially. If we ascertain how we can produce it, and what are the fewest conditions required for its presence, we have gained an important step in the inquiry. And if, having learned how to cause certain symptoms, we can carefully examine the state of the bodily organs when these symptoms have supervened, and compare it with their condition previously, we undoubtedly have an opportunity of acquiring knowledge which no one accustomed to such investigations will despise. If, by adding caustic ammonia to the jugular vein of a living sheep, the lining membrane is afterwards found to be studded with pink fibrin, we see at once that a fact has been ascertained of great interest in the study of the adherent clot of phlebitis. The same may be said of

rheumatic endocarditis, if deposits can be produced upon the valves of the heart by injecting a known substance into the blood of an animal. I might refer to other examples, but these will suffice to illustrate my first position.

To apply these general remarks to the special disease of insanity—that disease which beyond all others has taxed the efforts of pathologists to determine its real nature—I shall not be contradicted when I assert that, if we can at our pleasure artificially produce and as easily remove its phenomena (or, at least, some of its most remarkable and puzzling symptoms), we render them less mysterious and obscure, and call to our aid a powerful means of investigating the pathology of, at any rate, some forms of mental disease. We desire, above everything, in such an investigation, to have under our inspection the symptoms of this disease, originating we know how, commencing when we wish, changing their character at our pleasure, and, lastly, ceasing at our will.

Now, this opportunity, as I proceed to point out, is presented to us in certain induced conditions of the system during which very interesting experiments can be made upon the mind, due to the remarkable power exerted by suggestion in the susceptible state of the nervous system I now allude to. By what name to call this state I find it difficult to determine, for almost every term that is in use conveys an imperfect or an untrue idea. Perhaps I should be best understood by calling it hypnotism, or nervous sleep, the term introduced by the late Mr. Braid, of Manchester, and adopted by Dr. Carpenter; but the expression is open to objection, seeing that sleep is not an essential phenomenon, a fact of important bearing upon the present subject. "Braidsim," proposed by Dr. Philips, of Paris, avoids this difficulty, and I shall use it as well as hypnotism in this essay, including in the term the so-called "electro-biology" of Mr. Grimes, of America, and adopting Mr. Braid's explanation \*

\* That is, that they are in no way due to animal magnetism or the influence of one metal more than another. Whether there are other phenomena classed under the term "mesmerism" which cannot be explained on Mr. Braid's theory, is a question into which it is not necessary now to enter. I do not myself go further than he did. The subject is, however, well worthy of patient investigation. Superficial and prejudicial writers abound on *both* sides. The opposite theories are well represented by Cuvier and Braid respectively, the former holding that "the effects obtained on persons ignorant of the agency, and upon individuals whom the operation itself has deprived of consciousness [?], and those which animals present, do not permit us to doubt that the proximity of two animated bodies in certain positions, combined with certain movements, have a real effect, independently of all participation of the fancy. It appears also clear that these effects arise from some communication which is established between their nervous systems" ('Anatomie Comparée,' t. ii). The latter (Mr. B.) holding that "the phenomena are induced solely by an impression made on the nervous centres by the physical and psychical condition of the patient, irrespective of any agency proceeding from, or excited into action by, another" ('On Hypnotism,' 1843). Dr. Prichard is one of the few neutral writers who write as if they really wished to arrive at the truth, and do not merely give us their preconceived notions.

of the phenomena, which for my present object is quite sufficient.

But more important than the name is a clear understanding of the group of symptoms to which I now refer. We are all familiar with the experiment of requesting a certain number of persons to look steadily at any distinct object placed in such a position as to strain their eyes, concentrating their attention meanwhile upon one subject. We know that out of these persons a certain proportion will be affected by well-marked symptoms. What some of these are I wish to state clearly, although at the risk of wearying the reader with the enumeration of well-known facts. The first important circumstance to note is that, while, as in ordinary sleep, there may be various degrees of somnolency, from a slight loss of consciousness to profound coma, consciousness may at one period be seemingly intact, and a superficial observer fail to notice any change, and yet there be a peculiar state of the system present which is of great interest—a state in which the whole attention of the mind is generally absorbed upon one point, usually determined by some suggestion from without. The Reason and the Memory appear to be dormant, the Will passive, and the Imagination proportionately exalted. Be this, however, the correct mode of expressing this condition or not, the *fact* is indisputable that a condition of mind has supervened in which there is a very striking susceptibility to suggestion. And however absurd the suggestion may be, the subject, being no longer able to recall and benefit by his past experience, fails to recognise its absurdity, and the will being paralysed, he is impelled irresistibly to act in accordance with it. He is insane.

Such is the mental state induced. I may here observe that Mr. Braid pointed out two stages of hypnotism.

In the first the senses, except that of sight, the sensibility to heat or cold, muscular power, and some faculties of the mind, are greatly exalted. Consciousness remains, and the patient is docile. The pulse is quickened, and the expression altered.

In the second stage a state of depression of the system succeeds to that of excitement. The subject passes into a comatose condition. Rigidity of the muscles is present, or is easily induced.

It is necessary that I should here mention some examples of this interesting condition, so suggestive to the psychological physician, which have fallen under my own notice. They illustrate the abnormal mental states which I am anxious to place side by side with certain forms of insanity.

The first case I will refer to illustrates the loss of personal identity, from suggestion. A. B. was asked to state his name. He replied correctly, without hesitation. When hypnotized, and in the sleep-waking stage (being able to stand and apparently awake, but the expression unnatural and absent, as in somnambulism), it was

strongly suggested to him that his name was Richard Cobden. In a few moments he was asked his name. He immediately and unhesitatingly replied, "Richard Cobden." "Are you sure?" "Yes," was the reply. The same experiment, with different names, was tried in several other cases, with the same results. Fully roused and asked their names, these individuals at once gave them correctly. If the name of a King is suggested during the susceptible stage, not only is a person impelled to say it is his, but he feels and acts in a way which shows he *believes* he is a king.

Here we see an abnormal state of the mind suddenly induced, in which, under the influence of a powerful suggestion, a person temporarily loses his own personal identity, and is firmly convinced that he is some other person.

The analogous condition of mind in delusional insanity may, I submit, be recognised in the patient who believes himself to be another person. In the latter case there may be such a psychological condition that the suggestion, not, indeed, of another person, but of some powerful natural feeling, as pride, shall be irresistibly accepted as true by the mind. Indeed, with lunatics, the exciting agent of a particular delusion may come from without, and be truly a suggestion in the sense I have hitherto employed it, as when some notorious public event occurs which determines the character of the delusion under which the insane labour. If the succession to the throne were at the present time disputed, no doubt the number of cases admitted into our asylums with the predominant delusion of being a royal personage would be strikingly increased.

The hallucinations of the special senses induced in the hypnotic state are very striking, and strongly recall corresponding affections of the insane.

A man may be made, by suggestion, to think he sees a figure which is not present, or to see some person who is present in an entirely different form or dress than the true one, and may be made to mistake persons—for example, near relatives—in a way which exactly answers to what is seen in asylums for the insane every day.

The way in which such false sensations are produced reminds one of the bewitching effect of "the crafty Nix" described so well by a poet :

" She led me to her crystal grot,  
She set me in her coral chair,  
She waved her hand, and I had not  
Or azure eyes or golden hair.

" Her locks of jet, her eyes of flame  
Were mine, and hers my semblance fair.  
O make me, Nix, again the same,  
And give me back my golden hair."

Then, as regards the sense of hearing, persons, when hypnotized,

may be made to fancy that a musical instrument is playing, and playing a particular tune, when there is really no sound whatever.

The olfactory sense is no less easily deceived. Here is an instance. C. D, being hypnotized, was requested to smell the operator's fingers. He said he could smell nothing. The operator then asked him to take a pinch of snuff, and applied his closed fingers and thumb to the subject's nose. The suggestion quickly told. He snuffed for a moment, and was then affected precisely as a person would be who had actually taken a powerful sternutatory.

Then as respects the sense of taste, endless are the hallucinations and illusions which can be produced by suggestion. Suggest to a person rendered susceptible by hypnotism that he is eating rhubarb, chewing tobacco, or any of the disgusting things of the taste of which some patients in asylums bitterly complain, and the effect will follow. So a man, G. H, being hypnotized, had a glass of pure water placed before him, and was led to suppose it was brandy. He praised it as excellent—to him it tasted like brandy—and, calling for more, he drank it with avidity. J. K, a second case, being in the same abnormal state, was requested to drink some cold water, and while doing so, the operator drank some himself, and suddenly spat it out while employing an expression of disgust and horror. This at once strongly suggested that the fluid was bad, or even poisonous, and the subject, firmly believing it to be so, rejected it with abhorrence. Who does not see in this second example a resemblance to a patient who believes that what he drinks is poison?

Common sensation may be perverted in a variety of ways. The following is an illustration. C. D, being hypnotized, was led to suppose that he was covered with a swarm of bees. This suggestion was at once transformed into a belief, and he acted exactly as a person would, were he actually stung. He manifested every sign of pain, shook his hair, rubbed his head frantically with his hands, and then proceeded to take off his jacket in order to rid himself of his imaginary foes. He was evidently labouring under a hallucination of general sensation. The same may be said of another person, E. F, who, in the same somnambulic condition, was induced by suggestion to believe he had a violent toothache, the effect being increased by the operator's finger being applied to the cheek. Hugging his face with his hands, he swung to and fro, writhing with pain.

In both these cases, as in others, the train of induced hallucination was readily broken by a sudden shake or by a stamp on the floor. These particular forms of perverted sensation are not so strikingly parallel to cases of insanity as some which, I know, have been induced, but which, not falling under my own observation, I do not adduce here. However, the hallucination of being covered

with bees recalls those insane persons who have imagined themselves covered with vermin, and have experienced all the sensations of creeping, itching, &c.

Now, I would ask, how could we define these induced states of the mind more correctly or more forcibly than in the very terms which Esquirol employs to define those insane sensations and fixed ideas which seem to me so analogous, if not identical, and from which analogy or identity, I think, something is to be learnt? "A person," says he, "labours under a hallucination, or is a visionary, when he has a thorough conviction of the perception of a sensation, when no external object suited to excite this sensation has impressed the senses." The resemblance would be equally striking were I to take from the text-books of insanity the definitions of delusion proper, or false conception, or of illusion, and compare them with the artificial mental phenomena which I have brought forward. I think, then, I am warranted in the conclusion that these two mental states, the spontaneous and the artificial, are identical, *quoad* the insane hallucination, illusion, or delusion. I do not say that there may not be in, at least, some cases of insanity, with the same *symptoms*, a widely different etiology and pathology, but of this I shall speak subsequently.

The marvellous effects of sympathy—mental contagion—are, perhaps, nowhere better witnessed than when a considerable number are placed in a condition of hypnotic sensitiveness to suggestion, and are all inoculated with the same idea. In this state we see the counterpart of the epidemic mental diseases of the middle and other ages, and obtain an insight into the condition of the nervous system which ought to serve us a good purpose when investigating them historically, or when meeting them face to face.

Again, ecstatic madness or maniacal ecstasy often finds a remarkable illustration in the temporary condition induced by hypnotic means. In both the individual may be more or less incoherent, and in both he may forget what occurred when he was affected.

Religious insanity, zoomorphism, and other forms of mental disease, are beautifully illustrated by artificial means; but these psychological parallels, interesting as they are, need only be mentioned here as further examples of the strong family resemblance they possess. And if the position with which I commenced my paper is indisputable—that to produce a disease artificially, and to have it under our control, is an important means of studying its nature—I am justified in holding that, in regard to the particular disease of insanity, we may derive some precious hints as to its pathology from a consideration of the artificial, but happily evanescent, forms of madness to which I have referred.

Of these hints, that to me possesses the greatest interest which is derived from the evanescent character of these delusions; for here

we see the profoundest conviction, differing so far in nothing from an insane delusion, at once dissipated by certain means. What, one asks, can be the condition of the brain while this induced false conviction lasts? Is it essentially the same, but perhaps differing a little in degree, in delusional insanity? May it in the initial state of the disease have been exactly the same? And if so, what intensely interesting questions suggest themselves, not only in regard to the pathology, but the treatment, of insanity!

What is required to produce the condition I have termed artificial insanity? It would seem as if the only absolutely necessary condition is the fixed or expectant attention of the mind upon one idea. How far it is altogether a mental process, or requires the fixed position of the eyeballs, has been a matter of dispute. MM. Demarquay and Girand Teulon, of Paris, in their 'Recherches sur l'Hypnotisme,' have gone so far as to assert that this state is wholly brought about by the strained position of the eyes—the fixed stare—and is in nowise due to an act of mental attention. Much more probable is Mr. Braid's conclusion, that the latter is a necessary element in the production of this peculiar condition. Dr. Mason Good observes that in ordinary reverie or day-dreaming the attention "is riveted at the instigation of the will itself to some particular theme unconnected with surrounding objects," and this would, I imagine, be more correctly descriptive of Braidism than the opposite statement of the French observers. At the same time there can be little doubt that, not only is the concentration of the attention assisted by steadily looking in one direction, but the nervous and muscular exhaustion of the globe of the eye may act directly in inducing sleep.

And the experiment which, no doubt, many have, in common with myself, successfully tried, of fixing a hen or cock in one position (with more or less insensibility) by placing its beak on the ground, and drawing a chalk line from it, towards which its eyes converge in consequence, shows the influence (though, I imagine, not the exclusive influence) of the fixed position of the eyeballs and the concentration of vision. That vision is not essential is shown by the hypnotic effects produced on the blind by inducing a convergent squint. In the case of the fowl, also, we cannot refer the hypnotic state to faith or *expectant* attention, nor, I suppose, to the imagination. The difficulty, if not impossibility, of producing an effect on idiots, shows the necessity of being able either to command the attention or fix the eyes.

The author of the 'Anatomy of Sleep' truly observes that, to secure ordinary sleep, we must escape from thought, and he adds that he effects this by a process I have tried with success, viz., by turning the eyeballs as far to the right, or left, or upwards, or downwards, as one can without pain, and then rolling them slowly

in their sockets with this divergence from the direct line of vision. Thus occupied, the mind cannot think upon any subject, becomes a blank, and sleep follows. That only ordinary sleep succeeds from this process, which seems to involve the fundamental idea of that adopted by Braid, must, I suppose, be due to the difference in degree of intensity of the physical and mental strain, and to the difference, in some cases, in regard to what the individual is led to expect. In some sensitive persons, besides, it is probable that the above simple process would induce the peculiar nervous sleep of Mr. Braid. And, with respect to expectation—a modification of attention, and well termed “expectant attention”—we all know that, without any process or manipulation whatever, almost any effects may be produced, in hysterical persons, by simply affirming, that is, suggesting, what is about to happen. In fact, the minds of such persons are *already* more or less in the impressionable state temporarily induced by Braidism in a healthy mind. There is, therefore, a certain *predisposition* which must not be overlooked in trying to trace the effects of hypnotism to the simplest and only necessary antecedent. Nor, indeed, must we overlook it in insanity, nor, again, in the fact, daily observed, that certain people are predisposed to succumb to the suggestion and strongly expressed will of others.

Whatever influence the Will may have in the first instance in directing the current of thought in one, and only one channel, it is obvious that at a later stage it becomes merely a Prometheus in chains, and the mind is at the mercy of any forcible suggestion that is made—the condition of mind which so forcibly illustrates those cerebral acts to which Professor Laycock and Dr. Carpenter would apply the term automatic or reflex, and which have also been absurdly called electro-biological.

The written statement of an intelligent French gentleman (M. Laverdant), describing his sensations when under the influence of suggestion or affirmation (Dr. Philips, of Paris, being the operator), is an interesting illustration of *some* of the subjective phenomena of this state. I translate and abridge his description from this physician's ‘Cours de Braidisme,’ a work I did not meet with till the substance of this essay was written.\* M. Laverdant thus writes in addressing Dr. Philips:

“ I fixed my eye upon your disk, docile and in good faith.

\* I ought to make the same remark in reference to an article in the ‘Zoist’ by Dr. Elliotson, written about twenty years ago, which I recently had an opportunity of reading. In this paper, Dr. E. records the effects of suggestion in several cases—the effects produced illustrating, in the clearest manner, many of the delusions of the insane. Among these were the patient fancying herself glass, and fearing to be broken; fancying herself dead; the Queen of Sheba; that she was no larger than a seed, and would be pecked up; that a leg of mutton was hanging from her nose, &c.

" Scarcely two minutes seemed to have passed before I experienced a feeling of fatigue and weariness. . . . I settled myself down for a nap. Sleep did not come; but, instead, a fulness of the head, a certain *malaise*, a state of torpor. I retained my consciousness, however, perfectly, for seeing you remove the disk from my hand I said to myself, inwardly amused and rather surprised, ' Hold ! I am caught.'

" I was truly caught, and you made me mount the estrade and sit in an arm-chair. I calculated that five or six minutes had elapsed since the commencement of the experiment, but my friends say only three or four. I remained alone about a quarter of an hour, during which I heard or was aware that you were occupied with my companions in experiment. My eyes were shut and heavy. I was agitated; I incessantly passed my hands over the upper part of my head, to rid myself of an excess either of blood or of nervous force, which seemed to me to cause, not an exaltation, but rather a profound perturbation or perversion—a paralysis. I did not experience any acute pain nor yet any positive suffering, but extreme *malaise*, which partook of the nature, shall I say, of mental depression (*souffrance morale*). I felt weak and annihilated.

" You began shortly afterwards to practise upon me, and truly I became a machine under your directing will. You asserted something; at first I hesitated to believe it, and immediately after I was obliged to yield to the evidence of the *fait accompli*.

" ' You can no longer open your eyes.' And in vain I attempted to open them, and in vain my eyebrow was raised, and the skin of my forehead in wrinkles; the eyelids remained closed.—' You are nailed to the arm-chair; you can no longer rise.' And in vain my arms, which were at liberty and still active, attempted, by supporting themselves on the arms of the chair, to raise the inert mass of the body and lower extremities. I was nailed!—' Rise ! you can no longer either sit down or stoop.' And all my efforts to change my position and to dispel this ridiculous state of paralysis remained inoperative. I was free to move nearly down to the waist, while below this I was a slave.

" Whilst these experiments took place I chatted with those spectators who were near the estrade, and I gave to the audience a detail of my sensations, either spontaneously or in reply to questions addressed to me.

" ' You can no longer open your mouth.' And my jaws were firmly locked.—' You are going to gape; gape, you can no longer help gaping.' And I—I—I ga—ped, to my great vexation, and I am sure I began to be not a little confused and ashamed of the weakness of my poor flesh.—' You will soon lose the power of pronouncing the vowel A, and even the idea of it. Try ! You cannot say A.' And a murmur of doubt and amusement ran through the company.

I smiled myself, and made a gesture indicating my own doubt and provocation, but it was impossible for me to say A.

" You asked me to write my name, and one of my companions, certainly a witness of great weight, the distinguished editor of the 'Revue des Deux-Mondes' and 'Journal des Debats,' member of the Algerian Council, M. Jules Duval, presented me with a book which he held in his hand. I wrote my name, *minus* the two proscribed letters ; my hand squeezed the pencil without being able to make a stroke. . . . The mind itself seemed now to be deranged."

M. Laverdant recalled a circumstance afterwards, unobserved by his friends, namely, that while thus impotent in regard to the letter A, *when his attention was directed to it*, he at the very same time unconsciously used it in saying "Je ne peux pas la prononcer," a fact entirely in accordance with the true philosophy or *rationale* of these phenomena.

The extent to which in the foregoing case the individual was wide awake, and in the possession of his powers, except in regard to a special idea or act, renders the resemblance to certain forms of mental disease much more striking than when, as in dreaming or in ordinary sleep-walking, the dreamer and the somnambulist are asleep. We witness a condition stripped at least of some extraneous and unessential phenomena, and approach by some steps nearer to the mental state of the insane. In fact, we may reach this state by tracing the psychological phases which, by almost imperceptible gradations, occur, first, in simple castle-building and day-dreaming, in which the individual imagines himself the hero of a scene, perhaps a brave soldier or a wise emperor; secondly, in that remarkable intermediate stage which intervenes between being awake and asleep, in which a man may be said to be half sane, half mad; thirdly, in actual dreaming; fourthly, in spontaneous somnambulism; and lastly, in the artificial state to which this paper refers, and to which the paradoxical but expressive term "sleep-waking" has been applied.

I would here say a word respecting the physical symptoms of those who are under the influence of hypnotism or of artificial insanity. Nothing seems to have struck Mr. Braid more than the state of the circulation and the constant activity of certain functions, as that of the skin. It is true it is very difficult in examining his cases, to determine how much of the vascular change which undoubtedly took place, was due to the mere induction of the cerebral state, and how much resulted from the extension of the extremities during that condition. I say "during that condition," because, I think, he clearly proves that the mere extension of the limbs, without hypnotism, has much less effect in quickening the pulse than with it.

But, independently of and prior to the extension of the limbs,

Mr. Braid found the pulse quickened, the patient being conscious and susceptible to suggestions. When the limbs were extended the circulation was further accelerated. The same would happen, in degree, when vocal suggestions are made, and when attention is directed to a particular organ.

M. Laverdant appears to have experienced a weight about the head, and other symptoms indicating changes in the cerebral circulation.

The condition of the eyes themselves is of some importance in its bearing upon a question hereafter to be discussed.

There is, when a fixed stare has been resorted to, more or less lachrymation, slight pain, and injection of the conjunctiva.

Further, there is dilatation of the pupil after the first few moments, when the eyeballs are turned upwards and inwards, and the iris contracts. *prefixed*

(*To be continued.*)

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### *The Suicide of George Victor Townley.*

Certainly it would have been more agreeable to those gentler feelings which the occurrence of death rarely fails to produce in men, and more in harmony with that charity which willingly covers over the sins and evil behaviour of an erring creature, once he has paid the last debt of nature, to have made no mention more of the convicted murderer, George Victor Townley, but to have allowed him to pass in silence to his suicidal rest. That he whom an audacious intrigue saved from the extreme penalty which the law metes out to the murderer should have become his own executioner, was, perhaps, the last small act of justice which he could do to outraged society ; and of him, therefore, it may not untruly be said that nothing in his life became him so well as the leaving of it. But it has been the misfortune of Townley—a misfortune which pursues him even after death—to have been cursed with injudicious friends, and to be the helpless victim of some who, after the manner of parasites, would feed upon his notoriety and make to themselves capital out of his crime. It becomes then a duty not to keep silence under these circumstances, but truthfully to expose the passionate, though unsuccessful, attempt which has been made, by taking advantage of his suicide, and the vulgar prejudice in regard to such act, to set up a sort of justification of that foul disgrace into which, not the medico-psychological speciality only, but the whole medical profession, was mercilessly dragged on the occasion of his trial, and subsequently to it. Furthermore, since Townley's eventful life now constitutes a pathological fact in the annals of great crimes, and since tender

feelings of compassion can have no place in pathological investigation of a felon's nature, it is necessary, in the cause of science, however much we may regret the necessity, to present the issue of a case the previous course of which has been recorded and discussed in the numbers of this Journal for January and April, 1864, and more fully in a special pamphlet on 'Insanity and Crime' by the Editors. The following is the account of his death and of the inquest upon his body as given in the daily papers :

Yesterday afternoon Dr. Lankester, the coroner for Central Middlesex, held an inquiry at the Model Prison, Pentonville, into the circumstances attending the death of George Victor Townley, who died on Sunday night last, from injuries he sustained consequent upon throwing himself over the balustrades of the central hall of the above prison, while on his way from chapel.

The jury, having been sworn, proceeded to view the body of the deceased man, which lay in one of the outhouses of the prison. They afterwards inspected the place where the wretched man destroyed himself. It was in the central hall of the building, round which a gallery runs some twenty-four feet high.

Upon returning to the inquest room—

*The Coroner said*—I think, with regard to this case, you are all acquainted with the history of the unfortunate individual the cause of whose death you are about to investigate, and I must say that it will be better for you to direct your minds only as to how he came by his death, and not allow anything you may know of his previous history to influence your arriving at the conclusion. As you know, after having been condemned for the crime of which he was charged, he was reprieved on the ground of insanity, but subsequently this plea was cancelled, and then he was removed to this prison, where he met his death. And in order to arrive at this, I think you had better call the warden who had charge of him when he committed the rash act.

*Samuel Wm. Hill*, 20, Twyford Street, Caledonian Road, was then sworn. He said—I am instructing warden. I was on Sunday, the 12th, at five minutes to five o'clock, in the central hall underneath the landing. I heard some shouting from above, and, on stepping from underneath, the deceased fell at my feet. I am not aware if any one was with him at the time. I did not see any prisoners in the gallery from which he fell. I went by Mr. Jenkins's (chief warden) orders to get the doctor. I did not see the doctor come, but I saw the deceased removed to the surgery. He appeared to me to be insensible.

By the Jury.—I did not see the deceased after he was removed to the surgery. He never spoke after he fell.

*Robert Pardon Green*.—I am warden of D 3 ward of this prison. I was on the top of the circular staircase on Sunday last, at five minutes to five. I was superintending the prisoners coming out of chapel. On the prisoners coming into the B division there was a stoppage, and I then ordered them to walk on quicker. During the time I was addressing the prisoners I heard a shout, and on turning round I saw the deceased lying on the floor of the central hall. I remained at my post, and some of the prisoners cried out, "Poor fellow, poor fellow, he has killed himself!" I then ordered the prisoners to go to their cells. I did not, at the time, know who it was that had thrown himself over. The C division had all been to chapel.

By the Jury.—I was about twenty feet from the deceased when he threw himself over. The other prisoners were near him. It is a rule that prisoners

should walk about six feet apart. The deceased was not under my immediate care.

*George Bearman.*—I am a prisoner here. I recollect that on Sunday, the 12th inst., I was sitting on the right of the deceased at chapel. He was very quiet till the last hymn was sung. He then got up, opened his Prayer-book, and sang out the last two verses very loudly. I never heard him do that before. He said to me, “319th hymn.” That was the right hymn. He afterwards shut his Prayer-book, repeated the service, and then, going before me, walked out. He made a full stop at the bottom step in the chapel, dropped his Prayer-book, got hold of the rails round the gallery, put his feet on the steps, and sprang right over, head over heels, and, as he fell, he exclaimed, “Oh!” He fell flat on his face below.

By the Jury.—I always sat by his side. I never saw anything particular in him. He was always very quiet. He never used to speak. I have never been spoken to by any one on the subject of his death, and I speak without the least fear what I know of the case. We were all singing when the deceased began to sing. He sang very loudly the following hymn :

“ I fear no foe, with Thee at hand to bless,  
ills have no weight, and tears no bitterness ;  
Where is death’s sting ? Where, grave, thy victory ?  
I triumph still, if Thou abide with me.

“ Hold Thou Thy cross before my closing eyes,  
Shine through the gloom, and point me to the skies ;  
Heaven’s morning breaks, and earth’s vain shadows flee,  
In life, in death, O Lord, abide with me.”

He used to walk out of his cell, and go into chapel and sit down. He never used to speak to any one. When he jumped over, the warder was about twenty-four feet from him. He sprang over so suddenly that I had no opportunity of catching hold of him.

*Samuel Holmyard.*—I am a prisoner in this prison. I was present when the deceased threw himself over the gallery. I was about fourteen feet from him. He sat on my right in chapel. He sat in one position nearly all the time, with his head on his hand. He was behind me when I left the chapel, and, as I turned round to look at the clock in the hall I saw him leaning over the rails ; a minute afterwards I saw his legs in the air, and he fell on his head. I only spoke to the deceased once. I said, “How long?” and he replied, “Ten.”

By the Jury.—I meant, by that question, how long he had to serve. I never heard the deceased sing before, and it was his bass voice that attracted my attention.

By the Coroner.—I am quite positive he said “Ten.”

By the Jury.—I have been ten months in the prison, and during that time did not notice any alteration in the treatment towards the prisoner.

*Charles Lawrence Bradley*, surgeon to the prison, said—I was called to the deceased at five o’clock on Sunday. He was insensible, breathing hard, and presenting symptoms of concussion of the brain. There was blood on the nostrils and on the right ear. There was a severe wound over the right eyebrow, denuding the bone, which presented a fracture. There was a cut over the left eyebrow, a cut through the upper lip an inch long, another through the lower lip half an inch long, and there was also effusion of blood in the tissues of the eyelids. He died at twenty minutes past eight the same night. He died in the infirmary. I have since made a post-mortem examination. The tissue of the scalp was covered with blood. There was a star fracture on the right temporal bone, and coagular blood in all directions ; the base of

the skull was smashed, and the brain completely lacerated. There was a comminuted fracture of the left knee. He fell on his head, and died from fracture of the skull. The height he fell was twenty-three and a half feet. The substance of the brain, as far as I could see, was healthy. There was no evidence of any disease; its weight was fifty-five ounces, which is above the average by some ounces. His weight, at the time of death, was 11 st. 1 lb. He was twenty-five years old when he was convicted.

By the Jury.—There was no disease of the brain so far as could be ascertained, but, notwithstanding that, insanity might have prevailed.

By the Coroner.—He came into this prison on the 3rd of February, 1864. On admission he appeared in good condition. I have had opportunities of judging the state of his mind from time to time, and I assumed that if anything strange had occurred it would have been reported to me. I have seen nothing to lead me to suppose he was subject to attacks of insanity; nor has he ever been reported to me as having any tendency to unsoundness of mind. I have never observed anything in his habits of an unusual nature. I had frequent opportunities of talking with him, and I thought him generally cheerful. He was 12 st. 6 lb. on admission, and 11 st. 1 lb. on the 13th of January. Finding that he had thus wasted, I prescribed more bread for him, for which he subsequently thanked me. In my experience a man may have lucid intervals, but there would be no evidence of such insanity.

By the Jury.—The deceased never appeared to be desponding. I think, on the contrary, that his correspondence showed he had hope.

*Ambrose Sherwin.*—I am chaplain to this prison. I was in the habit of seeing the deceased frequently. I observed the state of his mind closely from the time he entered the prison. During the first twelve months he was here I had conversations with him upon the cause of his committal. He seemed perfectly insensible to the crime, and would talk coolly about it. He admitted he had committed the crime, but he denied that there was any guilt in it. From this I opine he was morally insane. Beyond this I never noticed any act of insanity. He was always cheerful, always ready to enter into conversation, and at all times extremely courteous. I have seen four of his letters written to his friends. He wrote a letter last Friday to his mother, of which a passage, I think, indicates an unsound mind.

The paragraph referred to was, at the request of the jury, read by the witness. Its tendency was that of finding fault with the present discipline, because one of his letters to his friends had been intercepted by the governor in consequence of its being interlined, which, according to the rules of the prison, disqualified it for transmission.

The Governor explained that the letter in question was not forwarded to its destination because it was written too closely. While the rules permitted prisoners to write as fully as they liked, they exacted that the writing should be confined to the lines marked in the paper supplied, otherwise he had no power to transmit them.

The Governor explained that the rule of the prison was that prisoners did confine themselves in writing to the ruled lines on the paper. They were allowed to write as fully as they liked, but were not permitted to write between the lines.

Examination continued.—By the Jury.—The deceased never remarked that he felt he should not complete his sentence.

The following letter, written by the deceased to his mother on the Wednesday before he committed suicide, was then read:

8th February, 1865.

“ My dearest Mother.—My writing gets worse and worse, partly, I suppose, from want of exercising it, and partly from the steel pen; however,

you won't mind, I dare say. Letter paper is only issued on Wednesdays now, which is the cause of the delay ; had I been aware of the new rule you might have had this last week, though it is doubtful. What can I say to you for your birthday any more, mum ? Little, I fear, to the purpose, as for hopes and wishes ; but although these are useless, there is still love ; would that my love and gratitude were in any way sufficient to repay you for all you have gone through for me ; but I must sit here Job's comforter. A pretty way, indeed, of wishing you many happy returns ! The fact is, mum dear, as is usual with me, I am muddled. I turn my brain inside out, and there is nothing there—stagnant. It is true I find what some people would call kind wishes, but then that's all rubbish, so what can I do ? I can only give you my best and kindest love, and tell you that I am just as usual—no difference whatever, and what I have already said, viz., that you must not trouble yourself about me or my state : what we are all doing, and what's the object of it, we can have no notion of ; it looks very nonsensical, but that's no business of ours, and, at any rate, we have had nothing to do with it, and perhaps we really do only see the wrong side of the carpet. This, however, is trite ; what I mean is, that such being the fact, past and future being equally beyond our control, never mind what happens to my body (you know law and society only profess to vent their spleen on the body), and consider that, after all, it is only with me the loss of a few personal comforts, being dressed queerly, and made to look a greater fright than one naturally is, and condemned to live among disagreeable people ; whereas with you it is very different, and far worse, for I have tried to put myself in your place, and have seen all that you would suffer, and fancying all sorts of things, I can't exactly enumerate ; but if you only saw how coolly I take it, and what little trouble there is in one's life here, I really do think, my dear mum, you would take heart. Remember, it is not with me as with most, I have no one depending on me. I am provided for for life, I may say ; therefore I have really no cause to take thought for the morrow. You know the peculiarities of my temperament—'idiosyncrasy,' I suppose Mr. What's-his name would say—and were it not for the trouble that my present position causes all of you, there would, I think, be little to regret. It seems odd, certainly, that when all parties might be suited so easily, this wretched bit of clay continues to eat, drink, sleep, &c., for no earthly object. But here, again, we get beyond our depth, so wise—Stop. And, after all, I will finish this (did you get a lock of hair I sent you with the last lot of books—it was in 'French ?') by wishing my darling mother as many happy returns of the day as possible, with such an unlucky wight of a son. By the way, I did not forget Kate's birthday. I forgot to tell you so. I had a foolish dislike to mentioning the birthdays at all, and half hoped she would forget mine.

" Many thanks for the last two letters and the cards, which I have, which the authorities were good enough to let me read. I need not say how glad I am to hear of your meeting with kind friends. I won't say what comes uppermost in my mind ; for this reason, I have found the Scotchman's prayer useful. By going on the opposite tack one only puts a stick into the hands of one's fellow Yahoos, to break one's own head with. You see, whatever else one loses, one gains experience here, and those emerging into the outer world will doubtless not fail to profit by it. Should they happen to have been troubled with an excessive benevolence they will find it moderated, while those two excellent and useful qualities secretiveness and self-esteem will be correspondingly developed. About visiting—from something Kate said I fancy you and she are thinking of coming. It is very, very good of you both, and I don't know how to thank you, but, my dear mum, *it must not be*. I told the governor so. I suppose he had not mentioned it. Re-

member, you would never have thought of such a thing had it not been for a misrepresentation, and I am so far from being grateful for the same that—well, never mind what; but you shall certainly never be exposed to anything of the kind again, and I may tell you that the very notion of your being within these walls, or in contact with this place in any shape or way, is perfect torment to me, and infinitely worse than anything else I have to bear. I dare say there is not a man in the prison of any respectability who would not be heartily glad if the stupid and cruel mockery of visiting were totally done away with. When you can see me without insult to yourselves, well and good—but that is unlikely. Pardon me, dearest mum, if this is abrupt. I would have said more—and more kindly—but have no space. I would rather not more than two came, and you can fix upon whom you would like to accompany the governor. After all, one can say nothing at such an interview: it must be unsatisfactory. I am perfectly well in health, just as usual, so don't make yourself uneasy about that.

"And now I must thank you for the eight books the governor brought me, especially for '*Gil Blas*' and '*Silvio Pellico*.' I am charmed with the latter. Do you know he sometimes reminds me of you? You would see, for any one else would, what I mean if you read it. Charley had it in French. '*Gil Blas*' I have nearly finished, and had many a good laugh over it. What a nice edition. But I am sorry you should have got it for me purposely. Don't bring any books for me, and don't send me any you are likely to want for yourself. Many thanks for the '*Sunday Magazine*.' I like it exceedingly, so thoroughly Catholic in its tone. Thank you for Pascal and Ollendorff; the latter does not at all matter being bound together. I think you had better not send me any more books that will have to be returned, excepting, perhaps, the magazine, but I will speak to the governor about that when I see him. There is always some trouble, signing a paper, &c. I don't think it will be necessary to leave my books behind me when I go from here. I will do so if you like, but we can speak about it. I fancy other men have generally taken theirs. I am nearly sure I shall not be allowed to write when leaving, besides, there might be no time; you never know when you are going. Tell the governor this, with my kind love. I don't think you had need be in any particular hurry about seeing me. I have a notion I shall not go yet awhile, but, of course, I know nothing, and it would be useless asking. Here I am, you see, at the end; there are plenty of other things I wanted to say, but I have crammed in as much as I dare. My best love to Charles and Katy: I always laugh at your and her letters. Did you see her last?—it was so like her. Thanks for the German characters, and whoever was so kind as to copy them out so carefully. With all my love, and thanks for your dear letters, ever, my own mother,

"Your affectionate son,  
(Signed)                  "GEO. V. TOWNLEY."

In answer to a question from the Jury, the witness said the deceased the first six months he was in the prison was employed in weaving and afterwards at shoemaking.

*Mr. Townley*, the father of the deceased, who was in court during the inquiry, and who at times was moved to tears, inquired if his son had, during his avocation, the uncontrolled use of tools?

He was answered in the affirmative.

This question was put with the view of showing that the deceased had had opportunities of committing suicide previously if he had been so disposed.

At this stage of the proceedings,

*The Coroner* said if the jury thought they had sufficient evidence to enable them to come to a verdict, he would go no further into the case.

They knew that the insanity of the deceased had been much discussed; and if they required evidence as to insanity having existed in his family he would call Mr. Townley, who would no doubt speak to the fact.

The jury did not desire to inflict this pain upon that gentleman, who, however, stated that there had been no less than eleven cases of insanity in his family.

*Mr. Bradley*, the surgeon, was here recalled, and said—I forgot to mention that upon examining the body I found incisions in both arms, from which I think he attempted to bleed himself. There were wounds on both arms. They were quite recent. I mention this to show that there had been some kind of suicidal feeling upon the deceased on the Sunday morning. He was seen by the warden when he was washing that morning, and those wounds did not then exist.

This closed the inquiry, and the Jury, after about ten minutes deliberation, returned the following verdict:—

“That the deceased destroyed himself by throwing himself from the gallery of the Model Prison, whilst in an unsound state of mind.”

They append the following to their verdict:

“The Jury regret that the letter was not sent, as they find nothing in it contrary to the rules of the prison.”

*The Governor* said that it should be forwarded to the directors of convict prisons.

The second letter which he wrote was as follows :

10th February, 1865.

“My dearest Mother.—The cause of the delay is as follows:—1st. Letter-paper is now only issued on Wednesdays. 2nd. The governor has thought proper to stop a letter I wrote you last Wednesday, the writing not being to his taste. He also requires me to keep to the lines; which, as it is not specified, I was not likely to do. I am sorry for this extra delay, for I fear you will have been making yourself very uneasy the last two or three days. These sort of petty annoyances, contemptible in themselves, become more serious when they affect you through me, and *vice versá*; unless, indeed, that be the object. Be this as it may, we must make every allowance for nature and education. One cannot expect good feelings or good taste from those whose very vocation has of necessity stifled whatever vestiges of humanity they may have originally possessed; in fact, to use a vulgar but expressive proverb, ‘what can you expect from a pig but a grunt?’ But I must curtail, ruled lines being the order of the day; so here goes for a *résumé* of my first letter. Your birthday! I am afraid, my own mum, my hopes and wishes are but trash, and I would that my love and gratitude were in any way adequate to repay you for all you have gone through for me; I can only wish my darling mother as many happy returns of the day as possible with such an unlucky wight of a son. If you got the lock of hair I sent you, you must take that as the present. By the way, I did not forget dear Kate’s birthday, though I fear she thought so. I had my reasons, though foolish ones. My health is good, as usual, so do not make yourself uneasy about that; besides it is not of any material consequence to me. Indeed, considered as a life preserver, it may be said to be a nuisance. Many thanks for your last two letters, the carols, and magazines, which the authorities were good enough to let me have. I need not say how glad I am to hear of your meeting with kind friends. I won’t say what comes uppermost in my mind, for this reason: I have found the Scotchman’s prayer useful: by going on the opposite tack one only puts a stick into the hands of one’s fellow Yahoos to break one’s own head with, and you see whatever else one loses

here one gains experience. About visiting: you must not for a moment think of it, mum, dearest, especially now; besides, the mere thought of your being in contact with this place is hateful to me. I have other reasons, but no space. Pardon me, mother dear, the abruptness and apparent unkindness of this, but it must not be; and I can tell you how thankful I am for your even wishing it—I mean your kindness and sacrifice of self. And now I must thank you for the books, especially for 'Gil Blas,' 'Silvio Pellico,' and the magazines. 'Silvio' I am particularly charmed with; he sometimes reminds me of you. 'Gil Blas!' what a nice edition; so sorry you got it purposely, and the magazines. Will not name the others; all very nice. I think I have enough books for the present, and perhaps you had better not send me any more that have to be *returned*, excepting, possibly, the magazine, but will speak to the governor on this subject, as well as about leaving the books behind me, &c. I don't think it will be necessary. I have been up before the doctor for inspection, which, I believe, is a *sign* of going *some time*, though it may be a month or two yet. It is certain that I should not be allowed to write—indeed there would probably be no time, you never know when you are going, and it would be useless asking. My best love to the dear governor (I tried 'father' at first, but it was 'no go,' though I am not quite easy about the other; in writing *to* him I should not think of it, but in speaking *of*, it is awkward; this is not lucid, but perhaps you have a glimmer)—also to Charles and Katy. Your letters and hers always make me laugh. I must not forget the dear aunts. Thank Aunt E. for the German, and whoever so kindly did it (Mrs. E'hard?). And Dr. Wash, what of him? Remember all friends. And now, my own mum, good-bye. My letters for the future must be peculiar, as you perceive. Thanks for your dear ones.

"Ever, my own mother, your affectionate son,

(Signed)

"GEO. V. TOWNLEY."

Whosoever can discover any evidence of insanity in the conduct of Townley while in prison, as all who were brought in contact with him agree in describing it, or in the two letters which he wrote a short time before his death, as published above, must be gifted with a subtle and sublime intuition that altogether transcends experience, or deems experience to be the last-needed qualification for a correct judgment. If anything was wanted to establish definitely the sanity of this miserable man, and to prove him the deliberate assassin, which in murdering Miss Goodwin he unquestionably was, these letters are admirably fitted to supply that want. They offer a painfully complete revelation of a vicious character which made use of intellect deliberately to plan the indulgence of passion, and elaborately to justify it afterwards. It is a characteristic of criminals that, save for purposes of hypocrisy, they never admit themselves to be so wilful and wicked as they appear; they mostly hold themselves to be far more sinned against than sinning. But while they have often more or less excuse for this instinct in the evil circumstances of their birth and training, we have an example in Townley of a criminal who, with a full knowledge of the good, and full power to pursue it, deliberately chose the evil, and consciously set himself, with a willing prostitution of talents, to the justification of his crime. If a crime really is crime under any circumstances, then of all criminals was

Townley one of the most criminal. In this so sad revelation of himself, we may notice the passage which follows, as some will gladly find in it the evidence of a good feeling relieving the general blackness :—“ About visiting — from something Kate said, I fancy you and she are thinking of coming. It is very, very good of you both, and I don’t know how to thank you ; but, my dear mum, *it must not be.* I told the governor so. I suppose he had not mentioned it. . . . I may tell you that the very notion of your being within these walls, or in contact with this place in any shape or way, is perfect torment to me, and infinitely worse than anything else I have to bear.” This is the pleasing expression of a kind feeling, but it is also the strongest testimony against insanity.

All those who had any knowledge of Townley in prison, agree that the suicide was the only act that he exhibited there in any degree evidencing insanity. Even the Rev. Ambrose Sherwin, good, easy man, whose experience of prisoners seems to have had a marvellously small effect in enlarging an illogical mind, was only definitely convinced of the existence of insanity because Townley had asked, “What can you expect from a pig but a grunt?” Perhaps if Townley had informed that reverend gentleman that he might justly expect from a pig, not its native grunt, but a sentimental dissertation on morality, he would have accounted him in the highest degree sane. That any one in the position of chaplain to a prison should be found to assert that a prisoner who will not confess the guilt of his crime must be insane, would be incredible, were it not that such simple men as the Rev. Ambrose Sherwin prove, that it is impossible to set a limit to human credulity and simplicity.\*

\* “ So this reverend gentleman would have thought Townley sane if he had not known his previous history, which had satisfied all reasonable people that he was sane. And in proof that Townley was insane, Mr. Sherwin refers to his opinion that suicide was not sinful. Why, there are thousands and thousands in the practice of sin who do not recognise its character, and they are called, not mad, but immoral or wicked. The sophistry of the passions will find an argument for any crime, but that it is not insanity but perversity. Here is another pretty specimen of reasoning from the same reverend gentleman :

“ In further cross-examination the reverend gentleman adduced, as evidence of the insanity of the deceased, that he had written a letter, intended for his mother, in which he had expressed feelings of bitterness towards the governor of the gaol because a letter which he had previously written to her had not been allowed to go, as it was not written on certain prescribed lines—the prisoner having crammed as much as he possibly could on the paper allowed him. The letter, which was not allowed to go, was read, and though there were a few peculiar expressions in it, there was nothing but what might be expected of a young educated man in his position.”

“ A man is mad because he is angry at the suppression of a letter for reasons frivolous in themselves, but cogent in the etiquette of a model prison. And we must accept even this as the model chaplain of a model prison! The conclusion of the jury, guided by a coroner of the old school, such as informed the mind of Dogberry, and, as it would seem, not unswayed by the egregious evidence quoted, was that Townley was of unsound mind when he destroyed himself, which is about as true as that he was of unsound mind when, of malice aforethought, he murdered his victim.”—‘ Examiner,’ February 18.

Townley's suicide was in reality an extremely logical event : it was the natural issue of the opinions which he held, and the position in which he was, and, viewed from the premises which he adopted, and which some other persons in the world, neither criminals nor madmen, adopt, the most reasonable act that he could have perpetrated. From the moment of the accomplishment of his crime, there was nothing left to live for ; life at its best must be a prolonged endurance of an almost intolerable burden ; in its termination was the only outlook of relief. Why, then, should he live and suffer ? Why, indeed ? He would willingly have died on the scaffold, and only allowed the unfounded plea which was set up for him at his trial, and consented to play the passive hypocrite, in order to save thereby, as far as possible, the feelings of his family, to whom it was naturally a most earnest aim that he should not die by the hangman's hands. When, however, his life was spared through a successful intrigue, then things were altered ; when he came to experience the dreary monotony of prison life, to brood over the frequent annoyance to his extreme self-love, to reflect upon a past gloomier than the grave, to contemplate the utter blank hopelessness of the future ; then he found that, as might have been expected, it required a far calmer courage than he had ever had, and a self-denial which he had never practised, to bear patiently so great and enduring an affliction ; and he took hastily the easier, direct means of escape, the coward's course of fleeing from present ills. But mark how well the character of the man is revealed, both in the prior feeble attempts at suicide, and in the last sudden successful one. A few ineffectual cuts in his arm soon proved to this brave murderer of another, that it is a much easier thing to inflict a great pain than to suffer a little one. The only way in which he could effect suicide was by a hasty act which, once entered upon, he could not further control ; by a sudden deed, the course and consequences of which inevitably followed the first step.\* The absurdity of representing a

\* "We learn from the inquest on the murderer Townley that in a model prison a prisoner can without the least difficulty destroy himself by throwing himself over the rails of a gallery twenty-three feet from the pavement of the hall below. Also, that in a model prison a man convicted of murder was permitted to work as a shoemaker, and trusted with the cutting instruments of the trade, of which he might have made deadly use against himself or others. Altogether, the view opened of the model prison is highly curious. Townley's account of the place to his mother was that—

"After all, it is only with me the loss of a few personal comforts, being dressed queerly, and made to look a greater fright than one naturally is, and condemned to live among disagreeable people. And if you only saw how coolly I take it, and what little trouble there is in one's life here, I really do think, my dear mum, you would take heart. Remember, it is not with me as with most. I have no one depending on me. I am provided for for life, I may say, therefore I have really no cause to take thought for the morrow.

"And well might he be content. He was supplied with books to fill up his time, and had many a good laugh over 'Gil Blas,' and was sentimental over 'Silvio Pellico.' For reading of another cast he had the 'Sunday Magazine,' no

man as the insane victim of uncontrollable homicidal and suicidal impulses, who can get no further than small cuts into his arms when he has the means of cutting himself, argues an unspeakable effrontery, or an ignorance inaccessible to reproach. It was not that he wanted experience in killing ; the knowledge and energy which served him to murder another, would not have failed in his own case ; the blow that killed Miss Goodwin would have sufficed for Victor Townley ; but the cruel hand which faltered not against another's, and that a woman's, life, was nerveless against his own. That he should fling himself suddenly from a great height, when he had failed to accomplish in a deliberate way that which he had determined upon, was exactly conformable to the character of him who found it necessary to stimulate himself with brandy as he went on his way to a murder. The suicide and the murder were acts of the same essential kind : they were both deliberately planned and impulsively perpetrated : the self-murderer was not inconsistent with the murderer.

Many untrue statements having been wilfully or ignorantly made with regard to Townley's manner of murdering Miss Goodwin, it may be worth while to set forth in plain terms the real facts. Few who have an exact knowledge of the particulars of the crime but know full well that he went with the deliberate design of doing it ; that, besides two knives which he had, he purchased for the purpose a large clasp knife, with a blade some inches long, which he used ; that he first stabbed her twice in the neck, but not mortally, and then, as the trail of blood proved, followed her as she was trying to get away from him, and deliberately *cut her throat*. The third mortal wound was not a stab, but an incised wound of three inches inches in length, and one inch and a half in depth, severing the carotid artery and jugular vein, and extending down to the vertebrae. He faithfully fulfilled his programme : "she has deceived me ; and the woman that deceives me must die." In his disgrace he was not entirely graceless ; for he confessed to the Commissioners that "he used threats of murder for some time before he struck the first blow." What, then, is the case ? It is this : that a man goes to a meeting with his betrothed fraught with the villainous design of murdering her should she finally reject his appeal, inspired with the false courage which brandy might impart to cruelty faltering before so foul a deed, armed with the necessary implement of murder ; that he threatens the heinous act again and again ; that he twice stabs his victim ineffectually, and then, as in frenzied terror she laughing matter, which he liked for its thoroughly Catholic tone ; and better still, he had 'Pascal' and 'Ollendorff.' So well cared for, kept, and amused, it is only strange that he suddenly resolved to terminate a life so much to his satisfaction. But there was so much levity in the man's nature that he may have doubted whether his specific gravity would pitch him from the top to the bottom of a gallery eight yards high."—*'Examiner,' February 18.*

rushes homewards, pursues her with the unrelenting fury of a hell-hound, and cuts her throat as one might cut a dog's throat. And this is the man whom humanitarians, blind to all else but their theories, would compassionate as the victim of injustice ; this the man in whose behalf it was sought, by a disgusting aping of science, to stay the just stroke of retribution ! If the truth must be spoken, the murder of Miss Goodwin was one of the most cool-blooded and deliberate crimes which the wholesome instincts of humanity ever most righteously rebelled against.

The active advocates of the madness of Townley have evinced such absurdly inexact and confused notions, as must, were there anything like an adequate general knowledge of insanity abroad, have subjected them to much ridicule and even contempt. By noisy clamour and empty declamation they have striven to conceal the vicious character of their proceedings, and, like a well-known fish, to escape under the shelter of the inky cloud which they have purposely made. Let us recall the real facts for a moment. The original main opinion of the murderer's insanity, which, as it surpassed all others in effrontery, so it surpassed all others in viciousness, was based upon the affirmation of a positive delusion in his mind ; and the "expert" who put forward this opinion took special care and special steps to make known that he did not infer insanity from the moral perversion, and to lay stress upon the intellectual delusion. Everybody now knows perfectly well that such delusion never existed, and that Townley not only did not affirm it as a delusion to any one else but this "expert," but that he was, as the reports of the two Commissions proved, rather anxious to explain the real nature of what was a true belief. Questionless, some will be found to believe that still there was an insane delusion ; that the "vast experience" of the expert engaged for the defence enabled him to detect a delusion which everybody else failed to perceive to be anything more than a natural and well warranted belief, and which even Townley himself did not know the true nature of. With such profundity of insight existing at the present day we should hold that, whatever be the case with the age of chivalry, the age of miracles is certainly not past. However, there is but one prophet vouchsafed to a century ; and so we can find no one to compare this "eminent psychologist" to but himself. James Atkinson was put on his trial at York, in December 1858, for the murder of his sweetheart, by cutting her throat, because she would have no more to do with him ; like Townley, he had been discarded, and, like Townley, he revenged himself by cutting the girl's throat. "I have had this on my mind," he said after the deed, "for three weeks ; and I told her that I would murder her if she would not have me." Not having had the educational advantages of French novels, this expression is not quite so tragically effective as that of

Townley : "She has deceived me ; and the woman that deceives me must die." The defence of imbecility was set up for Atkinson, and the expert who examined him—the same expert who miraculously discovered a non-existent delusion in Townley,—gave evidence that he answered with difficulty questions which a child of five or six years of age would have readily understood ; that "he did not know whether the Queen was a woman or a man ;" that "he did not know he was in York Castle, or whether York Castle was in Yorkshire or in London" that "he did not know who our Saviour was ;" and that "he did not know whether hell was in Yorkshire or in London !" In fact, "this was a case respecting which he (Dr. Winslow) had not the slightest doubt, and he never saw a case clearer to his mind." Although such strong testimony of extreme imbecility was given, however, the prisoner's father "had named him one of his executors in his will made two years ago." Some letters, too, written by the prisoner, while in prison awaiting his trial, and which may be found in the '*Journal of Mental Science*,' of April, 1859, are of considerable interest in relation to the special illustrations of extreme mental incapacity that were adduced. Although the prisoner was said not to know that he was in York Castle, he nevertheless heads one of these letters, *York Castle*, November 17, 1858 ; although he was so imbecile as not to know whether the Queen was a woman or man, he had indulged in regular sexual intercourse with the girl whom he murdered ; although "he did not know who our Saviour was," he writes to his parents, "I hope you will forgive me, as the Lord says we must forgive one another ;" and again, "I hope she has fallen asleep in Jesus." And although he could scarcely answer questions which a child of five or six years of age would have understood, he writes, "It is a thousand pities that I did not value our souls' eternal welfare before it happened. The more more I think about it, the worse it is. I had it in my heart to put myself away, but my heart failed me after I cut her. I feel that I deserve all that that I shall get in this world." The prisoner was acquitted on the ground of insanity ; and the following extract, copied in '*The Times*,' December 28th, 1858, from the '*Leeds Mercury*,' tells the rest of the story. "After his acquittal, the prisoner coolly walked from the bar into the dock, where he was engaged for nearly two hours intently reading a book. Since his trial he has put off the supposed *imbecility* which he displayed before the medical witnesses, and conducted himself with as much rationality, intelligence and acuteness as any prisoner in custody." Those who find anything puzzling or obscure in the "Townley case," might do well to study it by the light of the "Atkinson case." We doubt not that when, in the '*Lancet's*' severely sarcastical words, the vast experience of the distinguished psychologist is again questioned, the Townley and Atkinson scandals will be had in faithful remembrance.

When the real nature of the supposed delusion of Townley was exposed, an attempt was, of course, made to take refuge in the moral perversion, and in an impulsive insanity which conveniently broke out whenever it was desirable to indulge a passion or commit a crime. We have no intention of again discussing, on this occasion, the principles which ought to have sway with us in the diagnosis of what is called moral insanity ; nor do we care to meddle with those ill-grounded and unphilosophical theories on this subject, the advocates of which, getting hold of certain words which they continually cry, seem utterly unable to form a conception of the relations and responsibilities of the individual as a citizen. Because Townley's crime was of a startling kind, and because his friends were wealthy enough to purchase and put in motion the necessary machinery for a more startling defence, public interest was much moved ; and the feelings of all those fancied friends of humanity, whom a horror, greater than usual, never fails to excite, were led captive. The bold promulgator of a theory of insanity in any case where a crime is of more than usual turpitude, may always depend upon the clamorous support of certain people who, without pausing to get accurate information or to discriminate, throw themselves headlong into the stream of an unreasoning partizanship. It may be assumed with certainty that if these earnest advocates had been called upon to examine Townley, without knowing anything of his crime, for the purpose of signing a certificate of his insanity, they would not have been able to discover and specify particular facts such as would have warranted their signing ; they would undoubtedly have been far too prudent to expose themselves to the dangerous consequences of so ill advised an act. But while they would thus reason correctly in their calm moments and when acting under the sense of individual responsibility, they are inevitably seized by the epidemic of a great public excitement and, in the fever of passion, lose all their judgment. The Commissioners in Lunacy, who went down to Derby to examine Townley, would certainly never have permitted to pass their office as valid a certificate in which no more evidence of insanity was specified than their careful investigation of his state of mind elicited. And even if such an unlikely event had happened, a British Jury would not have failed, by the infliction of heavy damages, to have justly taught a severe lesson to the unfortunate practitioner who might have so rashly committed himself.

We should despair to convince those who hold that every suicide is evidence of insanity, that a man in his sound senses may voluntarily die rather than live under certain circumstances ; for those who have arrived at the complacent level of believing the views and feelings which they have, to be those which every sane man

must have, are not likely to be shaken in their belief, either by arguments or by examples from antiquity. It would be useless to ask them whether the maiden who prefers death to dishonour is mad? Whether Portia, unwilling to survive Brutus, was insane? Or Lucretia, resolved not to outlive her ravished virtue? After the taking of Carthage by Scipio, Asdrubal, not seemingly being mad, threw himself at the conqueror's feet. His wife, indignant at such humiliation, and bereft of such reason as might have taught her to undergo a like humiliation, cut her children's throats and threw herself into the flames of the burning temple of Æsculapius. What, again, shall be said of the suicide of Zeno, founder of the Stoics, who, finding life a burden, when nearly a hundred years old, got rid of it? Or of Cato, the great Censor? or of a multitude of others, ancient and modern, who have thought it better, with the "dying Indian," to die than to "linger like Christian cowards in a life of pain?" It is obvious that if a man in a Christian land has completely freed himself from those doctrines by which suicide is made so fearful an act, he is simply in the position of those who regard it with indifference or approval, and may logically kill himself. Accordingly, many suicides, like that of Townley, are so committed. In prisons successful suicides are not uncommon, considering the watchfulness which prevails there, while unsuccessful attempts at suicide are frequent. The records of one of our large prisons near London, show that there were, from 1852 to 1865, five successful suicides; in four of which the verdict of the Coroner's jury was "Temporary Insanity," and in one "Felo-de-se." In the same period, however, there were no less than thirty-six attempts at suicide, of which nineteen were undoubtedly real, while seventeen are described as feigned, but with this reservation, that it is very doubtful whether they were really feigned. Besides these notable instances, there were several minor attempts. As long as it is any consolation to the surviving relatives of one who has committed suicide to have a verdict that it was done while in an unsound state of mind, no one will be apt to find fault with the charitable feeling of the Coroner's jury. But it is a very different matter when we come to have it laid down, that a man who, in the interest of his passions and vices, has got rid of the conventional notions of morality, should escape punishment for a heinous crime on the ground of insanity, and condemnation on the ground of suicide. In view of so dangerous a principle, subversive of the foundations of society, it is necessary to set forth plainly the truth, that suicide is not only the irresponsible act of madness, but the responsible act of the supreme and deliberate criminal when he finds himself fatally worsted in the contest with society and his selfish course for ever put an end to. Of this latter kind the suicide of Townley unquestionably was.

There have been in all times, and there are likely to be to the

end of time, sentimental theorists who, grievously wanting in judgment, seize with a passionate ardour on any unusual case of crime which makes a great sensation, and are completely carried away by it ; but what the public should learn to bear in mind with regard to such people is, that they are by no means the disinterested and humane persons which they often deceive themselves that they are, while by reason of their intense feeling they are also void of a good understanding. Study the psychology of these clamorous folk, and it will appear that it is vanity that, consciously or unconsciously, eggs them on ; they are inspired by an extravagant self-feeling which constrains them to regard only the affection of self, and entirely incapacitates from the wider view of the criminal as an element in the social organism, and of the relations of his crime to society : the theory of their intemperate action is, not that society is acting unjustly to one of its members, for they never reach the conception of society, but that the punitive action of society offends their unbounded self-feeling and those narrow views of the immediate and present ill to which they are chained by it. It would be a mistake to regard their passionate zeal as the expression of a large-hearted humanity ; it is in reality the manifestation of ill-regulated feelings and small reasoning capacity. There are men who to the end of time must differ from the general opinion, simply because it is the general opinion ; it is a balm to their self-love to be wiser than the majority. The discussions on Townley's case have not failed to exemplify this truth : some who have had no exact knowledge of the particulars of the case, and no special knowledge of the subject of insanity, have not forbore to criticise and condemn the unbiased judgment of men who are confessedly the first authorities on insanity—on that ground, in fact, appointed by the Government to examine the prisoner—and who had thoroughly investigated, with conscientious scrupulousness, every particular of the case. We are so prejudiced as to prefer the calm judgment founded on experience and knowledge to the intuition of inexperience and feeling.

We should have scarcely thought it consistent with scientific dignity to have made more than a passing notice of Townley's suicide, and a passing reference to the great scandal of his trial, but that the '*Lancet*' has, with singular imprudence, by its advocacy of an utterly untenable opinion, given to the question a serious importance. After the severe and successful castigation which that journal received on account of its puerile comments on the bankruptcy of Mr. Windham, from a paper of the character of the '*Daily Telegraph*', it is surprising that it should again have fallen into the same unscientific error. The mischievous influence of such attempts as were vainly made to prove Mr. Windham incompetent, and Townley insane, is incalculable, and the damage done to the whole medical profession thereby extreme. We protest most earnestly against its being supposed that

the medical profession, or the medico-psychological speciality, is entirely incapable of rising from the narrow view of the individual as a subject of medical science to the larger view of him as an element in the social system,—of the man as a citizen, and of the relations of his crime to society. In such matters it is not a question simply whether a foolish fellow shall ruin himself, or whether a vicious or criminal person may not be of a bad breed and have had a bad training, but it is a question of the principles which must have sway in the maintenance of the stability of the social system. When, therefore, the leading organ of the profession lends itself to such one-sided, unphilosophical and mischievous views as the advocates of the incompetency of Mr. Windham and the insanity of Townley upheld, the character of the whole profession is degraded in the eyes both of thinking men and of the unthinking public. In an admirable letter addressed to the Chairman of the Commissioners of Lunacy, in April, 1860, by Dr. Hood, it is stated that, during seven years, from 1852 to 1858, seventy-nine patients were received into Bethlehem Hospital who had been acquitted of murder or of attempt at murder on the ground of insanity, *and that in several cases no symptom of insanity whatever was manifest during their residence in the Hospital.* These words we heard quoted in the House of Commons by a distinguished member, and quoted amidst approbation, as convincing evidence of the absurdity of medical theories with regard to insanity, and as constituting a fatal objection to the establishment of a medical commission for the purpose of ascertaining the state of a prisoner's mind, when insanity was pleaded. As a matter of fact, too, it can admit of no question that the unjust law with regard to what shall constitute legal insanity, would have abrogated before this, but for the mischief done by those scandalous cases which have now almost entirely destroyed the value of medical evidence of insanity. It is full time that an effort was made to purge ourselves of the discredit which we suffer by allowing, in silence, the reckless attempts made to implicate the whole profession in the support of ill-grounded and unscientific theories, and in the ministering to individual vanities and interests. We shall do our best on every occasion, as far as in us lies, to effect this most desirable aim, and, we have good reason to think, not without success; nor do we entirely despair of having the energetic help of the 'Lancet,' once it has awakened to the evil consequence of recent lunacy scandals, and to the injury which its own influence suffers by its forbearing to condemn them, as they deserve to be condemned. Meanwhile, we say advisedly, that, in the matter of Townley, the profession accepts fully, as the exponent of its views, the opinion arrived at by Drs. Bucknill and Hood, an opinion not less weighty by reason of the high character than by reason of the scientific eminence of its authors. Townley was neither insane in the legal

sense, nor insane in the scientific sense of the term: he was a deliberate criminal, both in the legal and scientific sense of that word.

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*On the Means of Extending the Public Asylum System; a Sequel,\**  
by C. L. ROBERTSON, M.D. Cantab., &c., &c., &c.

IN the 'Journal of Mental Science' for January, 1865, I published a paper containing a few remarks 'On the several means of providing for the yearly increase of Pauper Lunatics.'

By an unlooked-for coincidence the *Société Médico-psychologique* were, at the date of the publication of my paper, engaged in the discussion of the same question: '*Les divers Modes de l'Assistance Publique appliquée aux Aliénés*' (the several means of providing at the public cost for the care of the insane).

At the meeting of the *Société Médico-psychologique*, held at Paris on the 31st October (see the '*Annales Médico-psychologiques*', January, 1865), M. Jules Falret read a report which he had been commissioned to draw up, on a paper published in the November number of the same journal, by M. Auzony, on 'Asylum Farms.' M. J. Falret, in this report, included the consideration of the several questions which, in my paper, I had endeavoured to solve from our English experience. These questions thus raised by M. J. Falret, from his examination of "the several means of providing, at the public cost, for the care of the insane," were brought before the *Société Médico-psychologique* as subjects for discussion.

M. Jules Falret's conclusions are thus given:—

### I. *The Insane in Private Dwellings.*

"*1° Séjour de certains aliénés dans leurs propres familles*, avant leur entrée dans les asiles, ou bien après y avoir résidé plus ou moins longtemps,

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\* 1. "Des Fermes-asiles, ou de la Colonisation des Aliénés," par M. le Docteur Auzony, Directeur Médecin de l'Asile public d'Aliénés de Pau. '*Annales Médico-Psychologiques*.' November 1864.

2. "Discussion sur les différents Modes d'Assistance des Aliénés."—*Ibid.* Jan. 1865.

3. "On the several Means of Providing for the Yearly Increase of Pauper Lunatics," by C. L. Robertson, M.D. Cantab., Medical Superintendent of the Sussex Lunatic Asylum, Haywards' Heath.—'*Journal of Mental Science*.' Jan. 1865.

4. "Sur les divers Modes de l'Assistance Publique appliquée aux Aliénés;" Discours prononcé dans les séances de la Société Médico-Psychologique à Paris, le 26 Décembre 1864, et le 16 Janvier 1865. Par le Docteur J. Mundy, de Moravie, membre étranger de ladite Société et de celle des Aliénistes de Grande-Bretagne et d'Irlande. Paris, 1865 (*pamphlet*).

lorsque le médecin de l'asile juge possible de les renvoyer chez eux, comme inoffensifs ou incurables, moyennant une rétribution annuelle. C'est là un mode de secours à domicile pour les aliénés."

## *II. Extension of the Public Asylum System by the erection of Asylum Cottages, and of detached blocks on the County Asylum Estate.*

"2° *Placement de quelques aliénés choisis par le médecin dans le voisinage des grands asiles*, chez des paysans, des infirmiers ou des habitants des villages voisins, sous le contrôle du médecin-directeur. C'est là, à peu près, ce que les Anglais appellent le *Cottage-system*, que l'on peut subdiviser en deux parties, selon que ces habitations isolées sont situées dans l'enceinte même de l'asile ou au dehors.

"3° *Création de fermes agricoles* enclavées dans les grands asiles, ou simplement annexées, dont les constructions, l'organisation et les règlements donneraient aux aliénés plus de liberté relative, plus de bien-être, et un genre de vie plus rapproché de celui de l'homme en société."

## *III. Agricultural Lunatic Colonies.*

"4° *Création de villages d'aliénés*, semblables au village de Gheel, pour les malades incurables et inoffensifs, ou même pour tous les aliénés sans exception d'après certains auteurs."

They accord alike in their subject and in their arrangement with the heads under which, in my former paper, I divided the several means at our disposal for providing for the yearly increase of pauper lunatics in England. I there said that the means at our disposal for providing for the yearly increasing number of pauper lunatics may be thus classed :—

### *I. Single Patients; the Insane in Private Dwellings.*

### *II. Extension of the Public Asylum System, by the enlargement of the existing buildings, by the erection of Detached Blocks, and also of Asylum Cottages on the County Asylum Estate.*

### *III. Agricultural Lunatic Colonies.*

### *IV. Licensed Lunatic Wards in Workhouses.*

The latter division of licensed lunatic wards in workhouses was not discussed by the *Société Médico-psychologique*. It is not my intention here to review the long debates, not yet concluded (10th March), which followed the reading of M. Jules Falret's report. My present object is simply to add a few words in illustration of my former paper, and particularly with reference to my views on the extension of the Public Asylum System, and which appear to have sadly displeased and disappointed the adherents of the lunatic colonization system of Gheel.\*

\* Thus, in the 'Aehrenlese' for February—a journal which usually contains communications on the Gheel question, evidently sent by Baron Mundy—a note on my paper in the 'Journal of Mental Science' for January attributes my adverse opinions on Gheel (the first time, by the way, I ever gave an opinion on the question) to a weakness of character which one would not—the writer is good enough to add—have expected from so well read and sensible a man!

One of the speakers, and not the least distinguished, at the debates which followed the reading of M. J. Falret's report and conclusions, was my friend Baron Mundy, M.D., of Moravia, who having also read my paper in this Journal for January 1865, did me the honour of making mention of my views on the questions then before the *Société Médico-psychologique* in two elaborate speeches (*discours*) which during this discussion he delivered, and which he has subsequently published in the shape of a large pamphlet. He there passes in review the several means which I have enumerated as applicable to the extension of the public asylum system, and, as I should have beforehand guessed, condemning them one and all, and finishing with his oft reiterated tale of "*Gheel—le mot magique, le shibboleth de ma question,*" as he calls it.

### I. *The Insane in Private Dwellings (Secours à domicile des aliénés).*

Baron Mundy pronounces the system of placing the insane poor in their own homes as a visionary remedy—*une de ces panacées illusoires\**—and a fruitless attempt—*pium desiderium impossible*—to lessen the increasing number of the inmates of the public asylums in the different countries of Europe. Yet a system which relieves the asylum of the charge of 18 per cent. of the insane poor in England and Wales, and of 32 per cent. in Scotland, and which under proper precautions, admits of further extension, can hardly be termed a visionary or fruitless remedy. These terms belong, in truth, to another system.

Baron Mundy argues that this system fails alike in France, and in every other country in Europe from the insurmountable obstacles opposed to its adoption. "Il y a donc (he writes), en premier lieu, des impossibilités qui s'opposent à ce mode d'assistance publique. Ces inconvénients insurmontables, que je vous ai prouvés par des exemples tirés de votre pays, vous les rencontrerez dans toute l'Europe. *C'est donc un principe qui n'est applicable nulle part;* mais il faut y ajouter encore de nombreux obstacles d'une nature sociale, économique et médicale."

In reply to this assertion that the system of the insane in private dwellings, is no where applicable, I am content to remind Baron Mundy of an essay† which he has often quoted to me with approval,

\* "Ce mode d'assistance publique, sanctionné non-seulement en France, par la loi de 1838, mais légalement admis dans presque tous les Etats d'Europe et en Amérique, avec des restrictions plus ou moins accentuées, est encore une de ces panacées illusoires que l'on reproduit de nos jours, de temps en temps, comme moyen d'arrêter l'accroissement outre mesure des malades dans les asiles." Baron Mundy's panacea of Agricultural Lunatic Colonies (Gheel) has already, with more truth, been thus similarly termed "*the day dream of benevolent enthusiasts unversed in the real life of the insane.*"

† 'The Insane in Private Dwellings.' By Arthur Mitchell, A.M., M.D., Deputy Commissioner in Lunacy for Scotland. Edinburgh, 1864.

and in which Dr. Mitchell records, much beyond my more modest expectations, the success, theoretical and practical, of the system in Scotland of placing the insane poor as boarders in private dwellings.

That this system of placing certain classes of the insane as boarders in private dwellings admits, in England, of farther extension, *under proper supervision*, was a point on which I dwelt. At present in England and Wales, the condition of these patients—18 per cent. of the total number—is not on a satisfactory footing. I would, as I suggested, transfer their care (by a slight modification of the existing law) from the guardians of the poor entirely to the committee of visitors of the county asylum, and I would place their supervision, including the amount of the sum, and its payment, for their maintenance—and which might be charged to each union in their quarterly accounts with the asylum—entirely under the control of the visitors. The occasional inspection of these patients by the medical superintendent of the county asylum would tend to keep the local practitioners—to whom the visitors might entrust the medical charge of these patients—up to their work, and would in time secure to them fit and enlightened treatment. By such a system the county asylum would become the centre of all the lunacy business of the county, while the standard of treatment, alike in the union-houses and in private dwellings, would gradually be so raised, that they would tend more and more to relieve the asylum of the chronic lunatics who now are year by year there accumulating, simply because these outlets are, by the inefficient manner in which they are conducted, as yet closed against them.

## *II. The Block and the Cottage Asylum Systems (Création de fermes agricoles ; placement de quelques aliénés dans le voisinage des grands asiles).*

Baron Mundy proceeds to notice the second means which I stated to be at our disposal for providing for the great increase of pauper lunatics, viz., the erection of detached blocks and asylum cottages on the county asylum estate, and with which M. Jules Falret, in his report to the *Société Médico-psychologique*, classes the ‘fermes agricoles’—the asylum farm, either as surrounding the asylum or detached.

I need hardly add that Baron Mundy summarily condemns these several means of extending the public asylum system. “De ce mot seul (he says), on peut déjà tirer la conséquence que cela ne constituerait pas une réforme efficace, quand même cette réforme serait réalisable en pratique.”

I shall say here one word on his objections to these two means of extending the public asylum system, viz., by block buildings and by the erection of cottage asylums.

a. *The Block System (fermes agricoles).* Dr. Bucknill, I observed in

my former paper, has given us in these detached blocks a means of asylum extension capable of infinite application, as they may, of course, be indefinitely multiplied. They afford a bright, quiet home to the working patients and to the feeble and demented—removed as they are from the bustle and discipline of the main building. The detached blocks are supplemental asylums, differing only from the main building in greater simplicity of structure and less appearance of restraint. The principles of treatment in the isolation of the patients from the external world, and in the discipline of asylum life, remain the same in the main building and in the detached block.

Baron Mundy gives in his speech an excellent description of the block system :—

“ Un autre système,” he says, “ que le célèbre docteur Bucknill, actuellement un des visiteurs des aliénés qui dépendent du lord-chancelier d’Angleterre (*chancery visitor*), a surnommé et introduit le premier, c’est le *Block-system*. Ce système consiste en différentes maisons détachées de l’asile, construites, le plus souvent, dans son enceinte. Suivant les principes du docteur Bucknill, ces *blocks* doivent être d’une architecture et d’un agencement très-simples. Chacun doit avoir sa cuisine, ou bien une cuisine commune est établie pour tous les *blocks* détachés. Ces *blocks* ne contiendront que de 30 à 100 malades du même sexe, et ne doivent coûter que 1000 fr. par tête de malade.”

He also admits the value of the block system in the large reduction in the cost of construction—£50 instead of £150 per patient—which has followed its adoption. Yet he urges that because he saw a block building at the Essex Asylum which cost more than £100 per bed, that, therefore, the block system in England is degenerating by the cost which it entails. “ Cependant,” he says, “ le *block-system* commence à dégénérer en Angleterre, quant aux frais qu’il entraîne ; il devient, par conséquent, préjudiciable sous le rapport économique.”

If the block buildings, as Dr. Bucknill practically demonstrated in his “ New House,” at the Devon Asylum, can be built under £50 a bed, it is foolish to say that because the visitors of the Essex Asylum thought fit to spend more than double on their block buildings, that, therefore, the system has begun to fail owing to its inherent costliness.

Baron Mundy further objects to an expression I use in describing the block system as differing only from the main building, in greater simplicity of structure, and *less appearance of restraint*. For once the singularly accurate knowledge which Baron Mundy possesses of the English language, is at fault. The “ *less appearance of restraint* ” is clearly applied here to the absence of strong windows, corridors, and galleries, which characterises the new house of the Devon, as contrasted with the original asylum. I need hardly assure the Baron—what my writings for many past years will bear out—that I am as strong an advocate, and as zealous in the practice of the

English non-restraint system, as even our revered friend “*Dr. John Conolly, l’illustre héros de Hanwell.*”

The “*fermes agricoles*” of M. Auzouy, M. Jules Falret classes as a part of the block-system. Under the more familiar name of the asylum-farm, it has long been the chief curative agent in all our English county asylums. Its introduction, however, in France is of more recent date. M. Auzouy in his paper in the November number of the ‘Annales,’ gives an interesting account of the farm (under the absurd name of the *Colonie agricole de Saint-Luc*), lately purchased for the asylum at Pau, and on part of which the new departmental asylum there is to be built. M. Auzouy gives a decided preference to a farm surrounding the asylum, rather than to a distant or detached farm establishment; an opinion I should think shared by all practical men.

The *fermes agricoles*, even when known as the *Colonie de Saint-Luc*, please Baron Mundy as little as either the block system or the cottages, or other efforts to extend the public asylum system. He declaims in the following style against all such attempts :

“Ici, à la fin de mon appréciation de la quatrième question de M. votre rapporteur, je demande *quel changement a été produit dans l’ancien système par ce système des fermes* en Angleterre et en Amérique, où presque chaque asile peut disposer d’une ferme magnifique, annexée le plus souvent à l’asile? Absolument rien! On discute toujours, là aussi, la nécessité d’une réforme; on propose, en outre, le *Cottage-system* et le *Block-system*. Et même, chez vous, n’y a-t-il pas beaucoup d’asiles possédant des fermes parfaitement montées, comme, par exemple, Alençon, Leyme, Saint-Gemmes, Saint-Luc, et, avant tout, Fitz-James, sans compter beaucoup d’autres? Cela vous empêche-t-il d’employer, contre les aliénés, la séquestration sans distinction, continuellement, et, pour ainsi dire, perpétuellement? Vos ‘fermes agricoles’ ont-elles eu pour effet d’amener chez vous l’adoption du système anglais du *non restraint*? Non, certainement non! Trève donc à toutes les belles espérances d’un bonheur fictif et des avantages pratiques du système des fermes agricoles. En réalité, le principe de l’ancien système reste toujours debout dans sa roideur inflexible; les avantages offerts par les fermes agricoles ne peuvent modifier que très faiblement cet ancien système, de manière que cela mérite à peine d’être appelé un progrès!”

I am unable to reply to such vague assertion. My limited space does not permit me to indulge in similar adverse tirade, nor indeed do I care to do so.

b. *Cottage-asylums* (*Placement de quelques aliénés choisis par le médecin dans le voisinage des grands asiles, chez des paysans, des infirmiers, ou des habitants des villages voisins, sous le contrôle du médecin directeur*).—This third method of extending the public asylum system, and referred to both by M. Jules Falret and myself, offers to the patient a further curative agent, the value of which is so truly insisted on by the advocates of the Gheel system—that of living under the healing influences of the family life.

Such cottage-asylums consist of an ordinary cottage in which two or three patients reside, under the care and with the family of one of the married attendants of the asylum, or of some one similarly qualified. The 79th section of the English Lunacy Act sanctions the placing of the patients as boarders there, the certificates remaining in force.

I gave in my former paper several extracts from Dr. Browne's essay on 'Cottage-Asylums,' and to which I would now refer my readers.

The cottage-asylum stands midway between the asylum wards and the private dwellings, and combines, to my judgment, the advantages of both. The asylum discipline is to some extent upheld, and while the patient is readmitted to the domestic circle his cottage home is on the asylum grounds, and keeps him still under the supervision of its officers, and enables him to share the advantages of the general dining-hall, at least for the principal meal, a point on which I would set considerable store. It places the lunatic again in the family life from which his disease had alienated him, and is thus an addition to our curative appliances, as well as a means of extending the accommodation in our public asylums.

That this system of cottage-asylums will spread and fulfil, as far as is practicable with the insane poor, the aspirations of family treatment of the advocates of Gheel, I have already officially recorded my opinion in the fourth annual Report of the Sussex Asylum, and I have seen no reason to alter this belief. On the other hand, I cannot understand how any one could interpret this opinion into an advocacy on my part, of the impracticable scheme of lunatic colonization on the Gheel model. At any rate, I take this opportunity of distinctly denying that on any occasion, in public or in private, did I give my adherence to the application in England, of the vague day-dreams of the advocates of the Gheel system, as a means of providing for the yearly increase of our insane poor. On the contrary, as I said in my former paper, I believe it to be utterly impracticable—and if practicable, not very wise—to attempt to found such a colony as Gheel in England.

With reference to the cottage-asylums, Baron Mundy speaks of the extreme difficulty of carrying out this partial approach even to the Gheel system; and illustrates this by the history of a small experiment of mine, related in my annual report for 1864. It is quite true that I had many difficulties to contend with through the prejudices of the neighbourhood and of the landlord of the cottage, who refused to continue to let it to me for such a purpose! The patients, also—whom Baron Mundy often visited—tired of the plain fare of the cottage family-table, and sighed for the fleshpots of Egypt, and the well-regulated comforts of the asylum. I, therefore,

for the present, have given up the experiment, as I stated at the last annual meeting of our Association.

One result of my experience, was the small number of patients whom I found fit to be placed in these cottage asylums. Out of 250 female patients, I had always difficulty in finding 6 whom I could thus place. I had also frequently to change them, as when the novelty wore off the patients were many of them urgent to return to the asylum. Contrary to my expectation, the system worked better with the chronic than with the convalescent patients. The cost also was rather above that of the asylum. On the other hand, the cottage-asylum system must not be judged of by so limited a trial. To answer our expectations, the cottages must be the property of the asylum, whose tenants then the occupiers would be.

Baron Mundy does not, however, allow these difficulties to deter him from the advocacy of the system of cottage-asylums on the wide scale of agricultural lunatic colonies. "Pour éviter tout malentendu," he says, "nous devons ajouter ici que le projet de mettre quelques aliénés chez des paysans, des infirmiers ou des habitants des villages voisins aux grands asiles, diffère tout à fait d'un autre système, c'est-à-dire de la création de villages d'aliénés, destinés exclusivement *ad hoc*, que nous traiterons dans notre exposé sur la 3<sup>e</sup> question de M. votre rapporteur."

I would in conclusion, therefore, pass to the consideration of the third division of these remarks.

### III.—*Agricultural Lunatic Colonies (Création de villages d'aliénés, semblables au village de Gheel).*

On the subject of agricultural lunatic colonies, I made in my former paper the following remark :—

"A few words are necessary here on the question of agricultural lunatic colonies detached from the asylum—and only a few. For the last two or three years the agricultural lunatic colonies of Gheel and of Fitz-James have been persistently forced on our attention, as the only remedy for the ills of over-crowding which we are now suffering. The limits of this paper entirely preclude my discussing so voluminous a subject in detail. I would merely say that, after a very careful examination of the whole question, I am led to the opinion that it would be utterly impracticable—and, if practicable, not very wise—to found such a colony in England. Among the mass of literature which the Gheel controversy has produced, I would refer those further interested in this subject to three papers—one by Dr. Sibbald, which appeared in the 'Journal of Mental Science' for April, 1861; one by Baron Mundy, M.D., of Moravia, reprinted from the (late) 'Medical Critic' for July, 1861; and, lastly, to a very important paper in the same Journal for January, 1861, by Dr. Browne, Commissioner in Lunacy for Scotland. I leave this question, then, with the simple remark, that agricultural lunatic colonies do not appear to me to offer *any present aid* towards relieving the pressure on our county asylums, the subject which I am at present discussing."

Baron Mundy divides his defence of this system of agricultural lunatic colonies into three heads :

1. Their social advantages. 2. Their economical results. 3. Their curative results. "La base de cette question," he says, "repose sur trois principes, savoir : 1° Le principe social ; 2° Le principe économique ; 3° Le principe médical."

I shall in conclusion very briefly notice this system under Baron Mundy's three divisions.

1. *The social advantages of agricultural lunatic colonies.*—Certainly the public mind in England is not yet sufficiently moved by the baron's missionary efforts to realise the idea of abandoning the public asylum system,—so successful beyond all hope in its results,—in order to replace it by a series of outlying villages like Gheel, with its 10,000 inhabitants, and 1000 lunatic patients, while, if we look to the social advantages to be derived by the patients from such a system in increased comforts, greater liberty of action, and extended facilities of employment, I assert—as against Baron Mundy's assertion—that the advantages all lie on the side of the public asylum system.

2. *The economical results of agricultural lunatic colonies.*—These in England would, I am sure, be found utterly fallacious. Even, if it were practicable, to buy up a sufficient territory to construct such a village thereon, the price would be beyond computation, in an island where land sells almost like gold. Baron Mundy, under the economical advantages of this system, also says :

"Le principe économique exige que les frais d'entretien et de traitement des aliénés soient réduits au *minimum*, et que ces frais soient couverts, *s'il est possible*, par le produit seul du travail des aliénés, après l'introduction complète et rationnelle de la réforme."

I reply that no one, familiar with the real life of the insane, would venture to promulgate so unlikely an idea as that of there being any possibility of the product of their labour sufficing to pay the cost of the maintenance, and treatment of the insane poor. I submit this opinion with confidence to the judgment of all men of experience.

3. *The curative results of agricultural lunatic colonies, (le principe médical).*—I accept Baron Mundy's definition of the medical principle involved in the treatment of the insane. "Le principe médical" (he says), "a pour but 'de guérir le malade curable le plus promptement, et avec douceur s'il est possible ; et de rechercher les moyens de procurer le meilleur sort possible aux malades incurables.'"

These results, I hold, are best attained in a public asylum for the insane. I cannot think that in any cottage—be it ten-fold better than those of the Belgian peasants—the varied appliances required in the curative treatment of mental disease are to be found. No

advocate of Gheel has, however, asserted that agricultural lunatic colonies are fitted for the treatment of all forms of insanity.

“ La création des villages d’aliénés ” (says Baron Mundy), “ pour tous les aliénés sans exception, est donc, sans une infirmerie, un centre (un petit asile, si vous voulez) inadmissible et impossible . . . Il m'a été impossible de trouver un auteur qui eût prétendu que tous les aliénés, sans exception, peuvent être placés et traités dans les villages. Tous les défenseurs de ce système ont réclamé une infirmerie pour les aliénés qui ne seraient pas aptes au traitement familial.”

Now the public-asylum system professes to be, and is, capable of treating all forms of mental disease, and so far has a manifest advantage over this system of colonisation which it is desired to substitute for it.

Let us look at the several classes of mental disease in their relation to the agricultural colonisation system. He would be a bold theorist who would assert that recent acute cases are best treated in a peasant’s cottage in the midst of the wife and family. Yet to such lengths does Baron Mundy go in his advocacy of Gheel! ‘ Un nombre considérable,’ (he says,) ‘ et même une bonne partie des cas aigus peuvent, d’après l’expérience et ses résultats, être soignés paisiblement et avec toutes les garanties nécessaires dans les villages d’aliénés.’

One cannot argue with such an assertion save to say that he who makes it is “ unversed in the real life of the insane.” I would submit my opinion with confidence to any medical man, to say, whether he considers the asylum ward with its trained attendants, its baths, its padded rooms, its secured windows, &c., or the unprotected fireside of the cottager the fitter place for the treatment of acute mania?

Next, take the cases of dementia and those of dirty habits. How are they to be broken of their depraved habits, and drilled into some approach to the form of humanity in a labourer’s cottage? Here, also, any one familiar with the real life of the insane must know, what constant labour and supervision, at all hours of the day and night, this reconstructive treatment demands, and how large a proportion of our patients are the objects of it. “ The mistake,” (writes Dr. Sibbald), “ of sending unsuitable cases for treatment is, to my mind, the most fruitful cause of the present defects of Gheel. Demented patients, of dirty habits, form a considerable proportion of the population, and, from what I saw, I have no doubt of the impropriety of subjecting them to cottage treatment. Proper attention to them at night is impossible, and I satisfied myself by observation that their beds are by no means so cleanly as those for similar patients in any well-regulated asylum. The condition of these patients during the day must also be unsatisfactory, as there are no baths in which they can receive that thorough daily cleansing which

is indispensable to their health and comfort." "These patients at Gheel" (writes Dr. Stevens), "are left very much to follow their own instincts; the melancholic to sit and brood over his melancholy, or to wander about by himself; the chronic maniac with all his varied tricks and depraved habits here has full scope for his perverted ingenuity, varied mischiefs, and dirty practices; the want of care and control, or the so-called liberty in his case aggravating his disorder, and often tending to the enfeeblement of his vitality. The demented drag on their miserable existences to outward seeming very much as they do elsewhere, and so do the paralytic and idiotic, but what is their lot as to warmth, cleanliness, and healthy exercise?"

Lastly, as to the vaunted liberty of the patients under the colonisation system. Possibly the state of the violent and dangerous lunatics at Gheel may accord with continental ideas of liberty. I know not. Yet at Gheel one cannot (writes Dr. Stevens) move one hundred yards without observing the price at which this so-called liberty is obtained; the helpless, purposeless, wandering imbecile is fettered like the hedge-side vagrant donkey; straps or irons around each ankle, and these are united by a strap or chain; one poor wretch was observed with a piece of wood fastened between his legs to check a habit he had of passing out of his homestead by a breach in the hedge; many suffering from more active madness were seated in chairs to which they were tied or strapped, &c.

Of the 800 patients at Gheel (writes Sir James Coxe), 68 are subjected to some degree of mechanical restraint, but in 51 of these cases this is restricted to anklets connected by chains about a foot in length which are worn to prevent escape. About 15 patients wore leather girdles to which their arms are attached by short chains, &c.

And yet Baron Mundy advises us to go to Gheel in order to study the lunatic under a system of liberty! "Une chose que je ne puis pas proclamer à voix assez haute, c'est qu'il faut avant tout étudier l'aliéné en liberté, et l'étudier pendant longtemps, pour se convaincre s'il mérite la liberté et s'il est possible de la lui accorder."

I strongly hold that it is in England rather than at Gheel that means of further extending the liberties of the insane are to be studied, and that it is in the extension of our public-asylum system, in the manner I have previously indicated, rather than in the founding of agricultural lunatic colonies, that further advance in the treatment of mental disease is to be sought for and happily yet attained.

## CLINICAL CASES.

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*Cysts in the Cavity of the Arachnoid, or Hæmatoma of the Dura Mater, with remarks on their formation.* By SAMUEL WILKS, M.D. Lond., Assistant-Physician to Guy's Hospital.

THE last number of the 'Journal of Mental Science,' contains a communication by Dr. Ogle, on the subject of inter-arachnoid blood-cysts, in which he refers to a specimen sent to me from the Kent County Asylum. I regret that the preparation, which was placed in Guy's Hospital Museum, is lost, but we have in our possession a much older and better specimen, as well as a very recent one, which shows admirably the construction of these cysts. Had I known of Dr. Ogle's intention of publishing instances of this form of disease I should have been pleased to have offered him this case to have added to them, but as this has not happened, I now forward an account of the specimen, with the following brief general remarks on the subject.

Cysts in the arachnoid cavity are not common, but when met with are so remarkable, that they do not fail to strike the attention of the most careless observer. They are found accidentally in those who have suffered from chronic cerebral or mental ailments. They exist only on one side of the head, and consist of a hollow sac, which by dissection can be turned out, having the upper part in contact with the dura mater, and the under with the brain. The connection of the cyst with the dura mater is so intimate, that the early observers of the disease regarded the united membranes as one and indivisible, and the sac as being formed by the splitting of the dura mater into two layers, or by a separation of the (so-called) arachnoid from the dura mater. The lower surface may be found either adherent to the brain or perfectly free, whilst the edges of the upper and under surfaces of the cyst are firmly incorporated at their edges, and form by their union an acute angle. The interior of the cyst, if it be old, has generally lost all traces of blood, and contains merely shreds of fibrous material of the same structure as the walls, together with a limpid fluid and cholesterine.

Besides the older notion of the splitting of the dura mater and separation of its arachnoid, two theories have existed as to the formation of these cysts; the one, that they are the result of the organi-

zation of lymph, which has been poured out during a former arachnitis, the other, that they proceed from a chronic change in a previously effused blood. The latter theory was propounded by Mr. Prescott Hewett, in a paper to be found in the 28th vol. of the 'Medical and Chirurgical Transactions,' and has generally been accepted as affording the right explanation of their production. The effusion of blood which gives rise to them, has occurred, probably in most instances, from a blow on the head, which has caused the laceration of a vessel of the pia mater, but in some instances the blood may have been effused spontaneously from disease. This is an occurrence which we know may take place in children suffering from whooping-cough, although most commonly it is found in adults who are the subjects of Bright's disease. At whatever time and under whatever circumstances the effusion occurs, it is generally speedily fatal, and before any marked changes have taken place in the clot of blood. An important medico-legal question sometimes arises, as to its spontaneous or traumatic origin, and it becomes often a most difficult one to solve; as a general rule (and fortunately as a means for diagnosis) injuries to the head affect the surface of the brain, whilst disease involves the interior; but should an effusion occur spontaneously on the exterior of the brain, we are then often placed in great difficulty with respect to the discrimination between a morbid effusion or one arising from injury. It is necessary to allude to the fact of spontaneous effusion of blood occurring on the surface of the brain, because in many cases where a cyst has been found there has been no history of injury.

That an effusion of blood, which shall subsequently organize and involve the surface of the brain, should be connected with a mental disturbance, is what might be expected, or, as in Dr. Ogle's case, be associated with a general paralysis, for it is very probable that in these cases the whole of the cineritious structure may undergo a chronic inflammation. And here it may be remarked, that such an occurrence as an effusion of blood and its subsequent organization, may be more common than we are apt to suppose, and may be one of the causes which lead to impairment of the mind after an injury. We know that after a severe blow which causes a concussion of the brain, small blood-vessels are ruptured; as a consequence a disintegration may ensue in the cineritious structure, or a slow inflammatory action, either of which may impair its integrity; but besides these changes, or coincident with them, it is probable that membranes may sometimes be forming from an effusion of blood, which shall also interfere with the brain functions. That cases of mania and imbecility arise from injury, is a fact that is well known, I am assured, to every superintendent of a lunatic asylum. Some experience of my own is not altogether wanting in such cases, especially when they are of a recent date as the following. A boy, æt. 11, is

now attending as an out-patient at Guy's Hospital, in consequence of an injury to the head. He is led in by his father, and appears to be in an idiotic condition. He fell off an omnibus six months ago, on to his head; he had concussion of the brain, and had a blood-tumour form on the scalp. He was previously an intelligent lad, and there is nothing in his conformation to contradict the assertion, but after the injury his memory began to fail him; he was obliged to leave school, as his capacity for learning appeared to be gone; he ceased to read, and in fact has sunk into a state of imbecility. In addition to these symptoms, he had a fit a month ago, and several since. How far this boy is suffering from a condition of brain which is recoverable, remains to be seen; but in all probability the cineritious structure has been structurally impaired, either by the original bruising, or the subsequent inflammatory process which may be going on within; or even, it might be suggested, by the organization of a layer of blood in connection with the surface of the brain. I use the term inflammation of the cineritious structure in a very general sense, as implying a chronic degenerative change, such as is met with in a cirrhosed liver or a granular kidney.

Cases like that of this boy are constantly met with in their less severe form, and are to be found coming before the notice of the profession and the public in our courts of law. Unfortunately, we hear very opposite opinions expressed by medical men in these cases, and which thus too often bring much discredit on our calling. There are those, for example, who see no other effect of an injury to the head than concussion, compression, or paralysis; and if these conditions be wanting, the patient is said to be unaffected. If, however, the case be brought before a medical man who chooses to observe closely the altered mental phenomena of the patient, he will often be convinced that the latter is speaking truthfully when he declares, that since his accident he has been unable to conduct his business with the same method as before; that his memory fails him, that his mind wanders, and that his capacity for any mental labour has sensibly diminished. As in such instances the symptoms are not obvious to the senses of the medical attendant, but must be received in great measure as they are described by the patient, the case is open to the suspicion of being one of invention, or at least of an exaggeration of the symptoms. Because there is a possibility of this being the case, and because there is no marked paralysis of any part of the body, or any other tangible lesion which is clear to the jury, the applicant for damages is declared to be a sound man. Because the blow which was received did not, for obvious reasons, injure that part of the brain which rules over volition, and no paralysis exists, therefore the nervous centres are not injured. Such is the method of argument which is suggested to them by the counsel

at the bar, and which may indeed have been placed in his brief at the instigation of a medical man who has taken upon himself the part of an advocate. Sufficient of the physiology of the brain, however, is known to be assured, that the central parts are connected with volition, and the surface with the mental processes. Since, then, the central parts are more liable to disease (probably from the vascular distribution), we are constantly meeting with paralysis without any mental disturbance, and on the other hand, if the surface be affected, as it is most liable to be, from injury, there would be impairment of the intellectual functions without, of necessity, any bodily weakness.

The effect of injuries to the head are, therefore, of great importance in connection with cases of mental impairment. The knowledge of the circumstance, too, may be of the utmost importance to the family of the patient; indeed, there is no one who might not feel the deepest interest in the distinction between the insanity of hereditary origin, and that arising from injury. In the case of a life to be insured, the fact of a parent dying in an asylum might affect the amount of premium to be paid, and yet the disease from which the patient suffered might have been caused by an accident, after the birth of the candidate for insurance. The same important distinction is needed between mania arising from a tumour or other local disease, and yet this fact may be altogether unknown in the absence of a post-mortem examination.

To return to the subject of effusion of blood; it is certain that in most cases where this occurs, whether from injury or disease, death speedily takes place, either from compression or from the laceration of the brain which gave rise to the effusion, and thus it is that an opportunity is so rarely afforded for witnessing the blood-clots in the various stages of formation; for although these may be sufficient to cause nervous symptoms, their presence is not incompatible with life, and thus their discovery is merely accidental at any subsequent remote period. It must be remembered, however, that, owing to a different explanation having been once given as to their origin, it is highly probable that many of those cases where so-called layers of lymph have been met with on the dura mater have been instances of this cyst development. For example, in the museum of Guy's Hospital, there are specimens showing delicate membranous layers covering the dura mater, and these were attributed by Dr. Hodgkin to the organization of lymph; and in those instances where blood was actually present, it was supposed that this had been effused between the dura mater and the arachnoid, which is described as covering it. The fact of a clot of blood putting on a membraniform appearance was scarcely recognised, and yet it is constantly witnessed in the case of a clot forming in a blood-vessel, or in a coagulum discharged from the uterus, and which may in consequence be mistaken

for an ovum ; also in many other instances. There is an old preparation in the museum, taken from a man who was a patient of Dr. Bright's, and who had been long lying in a comatose state with diseased kidneys, in which patches of effused blood are seen covering the dura mater ; these have a polished surface, and were considered to have been effused beneath the arachnoid,—“ although very thin the membrane was too firm and resisting to be regarded as a false membrane, formed by the fibrin of the effused blood.” Dr. Hodgkin in his lectures gives the same explanation, and quotes Foville as an authority for his views. It is clear that Foville is describing the same class of cases as are now under review, although, as I say, he gives a different explanation of the formation of the membranes, believing they are the result of inflammation. He says that there are often two considerable layers of false membrane extended over the whole of the internal surface of the arachnoid lining the dura mater, and the external surface of that covering the brain ; these are applied to the two surfaces, but are so slightly attached as to admit of ready separation from them. In his cases they presented a considerable and uniform thickness, a good degree of firmness, and were of a yellow colour. There were but slight and partial adhesions between their opposed surfaces. There were thus four distinct membranous layers external to the brain. Foville thought that the distinctness and uniform diffusion of the two layers of false membrane were attributable to the movements of the brain. In one case a quantity of blood was found. All these cases were said to have commenced by an acute cerebral attack which, in one instance occurring in an old soldier, had been caused by a violent blow on the head. In the other instances he had not been able to ascertain the cause. There was a similarity in the symptoms presented before death in all these cases, and in several they had existed for years. The patients exhibited a state of most complete stupidity, accompanied by an apparent paralysis of nearly all the organs of sense ; they actually resembled statues, with this difference, that when pushed they walked, when set upright they kept their place, and when food was put into their mouths they swallowed it. Their eyes, eyebrows, and other parts of the face remained perfectly motionless, the sensibility of the skin appeared mechanical, for if a limb was pinched they would withdraw it, but without any other evidence of suffering (general paralysis?).

From these observations of Foville it is clear that he had recognised these false membranes on the brain, and that he had associated with them considerable diminution of mental and bodily power. One strong argument in favour of their being formed from effusions of blood rather than lymph is gathered from the statements that there has been no history of injury in many instances ; for we know that an effusion of blood may occur spontaneously, but that an

idiopathic arachnitis is a condition altogether unknown. An idiopathic meningitis is an affection where the lymph is poured out beneath the visceral arachnoid, or rather in the pia mater, and affects one side of the brain as much as the other; whereas a simple arachnitis, or that case where the inflammatory product is poured out upon the arachnoid surface, is altogether unknown as occurring independently of injury or disease of the skull.

The old specimen in Guy's museum of inter-arachnoid cyst was sent to the museum many years ago, by Dr. Allwork, of Maidstone, as having been found in the head of a sailor who had suffered from epilepsy for thirteen years. It was described as a portion of dura mater from over the left hemisphere, consisting of two very thick layers, and having between them some dense areolar tissue. It was supposed to be formed of a separation of the layers of the dura mater, but it is clearly a cyst resulting from the previous coagulation of lymph or blood which had at some previous time been effused.

**CASE.—*Cyst in arachnoid cavity.*** The specimen which has suggested the present remarks, was taken from the body of a young man who was brought to the dissecting room of Guy's Hospital during the present session. On removing the calvaria the dura mater on the right side felt boggy, and after cutting the membrane all round in the usual manner, it was found to be firmly adherent to the right cerebral hemisphere. On removal of the dura mater, the existence of a cyst on the right side was very evident; but so incorporated were the edges, that it appeared as if a cyst were formed in the dura mater itself, that is, by a splitting of its layers, if this were possible. On cutting through the upper surface the cyst was opened, and was found to contain within it three or four ounces of an opaque glistening white fluid, which on standing deposited half an ounce of cholesterine, but no blood crystals were seen. It was then found possible to separate the outer wall, which had appeared like one membrane, into two layers, the external one showing itself to be the true dura mater, and thus, if it had been completely stripped off, it would have left the cyst free, lying in the cavity of the arachnoid. It had thus been placed on the right hemisphere of the brain, and corresponded in shape and form to it, with its upper surface closely adherent to the dura mater, and its lower surface to the brain. The adhesions between the convolutions and the cyst were formed of tough fibrous tissue, which left each surface shreddy on separation. There was a small bony plate at one spot, as also on the dura mater on the left side. The interior of the cyst was of a white colour, and quite smooth; as the upper and under surfaces formed nearly plane surfaces, they joined at an acute angle on each side, and were here inextricably united. At their junction towards the median line there were several short bands in the interior, which united together the two surfaces.

Unfortunately no detailed or lengthened history could be obtained about this young man. He had been the inmate of a London workhouse for two years, during which time he had been regarded as half-witted, and quite incapable of following any occupation. He was fond of frolicking and tumbling about. When spoken to, he generally answered with a rude sharpness. His history could be traced back for seven years, during which time he had never had any illness; he had never, as far as was known, had

any fits, nor any active cerebral symptoms, nor received any injury. He died of pulmonary consumption.

I have already stated that I have never met with these cysts in the process of formation, as death would not occur during that time except by accident. I have, however, in the course of hospital experience met with two cases where effusion occurred on the brain as a result of injury, and where death was protracted to twenty-five days and twelve days respectively. In these a membraniform condition had already made its appearance in the brain, and in one of the cases it will be seen that very peculiar symptoms were present, and not altogether like those resulting from concussion.

*CASE.—Effusion of blood from injury,—death in twenty-five days.*  
A. W., æt. 25, was admitted under Mr. Cock's care on Oct. 24th, and died Nov. 15th. Three days before, on the 21st, while in a state of intoxication, he was thrown down in a scuffle, and struck his head against the pavement. He was taken up insensible, and carried to a neighbouring hospital, where the wound was dressed and the man sent home. Although he then partially recovered his senses, he remained in a half stupid state during the following day, and in the evening he had a fit, which was called epileptic. On the morning of the 23rd he had another fit, and on the 24th he was sent to Guy's Hospital.

When admitted, he was in a state resembling that of concussion; a scalp wound existed on the left side of the head, towards the back part. In the evening he became restless, and had symptoms like those of delirium tremens; opium was therefore ordered by the dresser.

On the 25th he was quiet all day, but in the night he was seized with another epileptic fit, which lasted a quarter of an hour, and left him in a state almost maniacal, after which he sank into a half-comatose state.

On the 26th he had three more fits, which lasted some hours, and the left side was more convulsed than the right.

On the 28th, he was a little roused from his lethargic state, and appeared better again all day, but still with symptoms like those of delirium tremens.

On the 30th he was still very restless, and had no sleep at night. There was now a good deal of febrile action present, the tongue was furred, and the man was very low.

He after this gradually sank into a half-comatose state, and occasionally screamed out. The pupils finally became contracted, and the sphincters paralysed, and on Nov. 15th he died.

*Post-mortem inspection.*—There was a dry scabbing wound on the left side of the head, over the posterior part of the parietal bone, but there was no injury to the bone itself. On removing the calvaria the dura mater was observed to be healthy, but immediately beneath it was a layer of blood covering the hemisphere on the right side, and this was almost an inch in thickness; it existed more on the anterior and lateral parts towards the base. The clot was shreddy, and in some parts of a dull red or ochrey colour, showing, from the changes in the haematin, that the blood had been effused for some considerable time. On two portions of the base, this yellow clot was closely adherent to the cerebral structure, and on removing it the latter was found to be somewhat bruised and soft. It was thus tolerably clear that the source of the haemorrhage had been a ruptured vessel of the pia mater at this spot. None of the larger arteries or venous sinuses were found injured. There were no inflammatory products in any part of the brain.

CASE.—*Effusion of blood from injury,—death in twelve days.* A. G.—, æt. 18, was admitted into Guy's Hospital under Dr. Barlow, on July 17th, and died on the following morning. Owing to the nature of the case, very little history was procurable, but it was discovered that on the 6th of the month he was fighting in a barge with some men, when he received a blow on the head. He did not suffer much in consequence, and continued his employment during the next ten days, but on the eleventh, finding his head ache, he came to the hospital. He walked up to his ward, and appeared quite rational, his only complaint being pain at the back of the head. There could be little doubt that he had been very ill, but wished to conceal his condition, for he was then very depressed, and had much febrile disturbance. Without any fresh symptoms which were observable, he died in the night.

*Post-mortem examination.*—Body, that of a strong muscular young man; his hands and arms were much discoloured by bruising, as if he had been engaged in a fight. The head presented no external signs of injury, and the bones were not fractured. On removing the calvaria the dura mater was of a dark colour on the right side, and was flaccid; on lifting it up, its inner surface as well as that of the brain, was seen to be covered with blood, being contained in fact in the cavity of the arachnoid. The blood was fluid, or in form of loose coagulum, and flowed out into a measure until about four ounces were collected, though there still remained some clots adherent to the membranes. The whole of the right half of the brain was surrounded by the effused blood, and which had evidently compressed it; this was shown by the septum of the ventricles being pushed over to the left side. The blood had passed down to the base, and somewhat flattened the pons variolii. The left hemisphere was unaffected; there were no inflammatory products to be seen by the naked eye. The brain itself was carefully washed and examined, in order to discover any breach of surface as a source of the haemorrhage, but none could be found; the brain-substance also was healthy, as well as the ventricles. No laceration could be found in the sinuses or meningeal vessels, from which the blood could have flowed.

As regards the *effused blood*, that which was fluid and existed as a loose coagulum, fell from the surface, and this appeared of a slightly brown hue, as if not quite recent, or as if some old blood was mixed with it. When this was removed, there was found adherent to the brain and dura mater some thin layers of coagulum, of an ochrey colour, showing that the blood had been present for some days; most of this could be washed off by a stream of water, still leaving, however, one or two firmly adherent patches on the dura mater; these could be stripped off as *thin membranous layers*, and when examined by the microscope showed a fibrillated texture, and also numerous cells and granule masses, so that probably some inflammatory material was here mixed with the blood. No crystals of haematoxin were discoverable in any part.

**PART II.—REVIEWS.**

*Aristotle; a Chapter from the History of Science, including an Analysis of Aristotle's Scientific Writings.* By GEORGE HENRY LEWES. London: Smith, Elder, and Co., 1864.

MR. LEWES deserves our gratitude for having appreciated one of the greatest needs of science in these days, and for having attempted to supply it. Unquestionably, one of the gravest evils under which our men of science—and especially the cultivators of medical science—at present labour, is the general ignorance which prevails amongst them as to the history of scientific opinions; prevails, indeed, to a greater extent than was ever the case, at least in the higher ranks of the medical profession, in any previous period of scientific activity and reformation like the present. Less than ever do medical men seem to remember that opinions always have a history and an organic growth, and that unless their embryonic forms be studied carefully there is little prospect that their maturity will be understood. In the insolence of our success, we of the nineteenth century are apt to believe that the triumphs of our modern science are all-important, and that the student would be only wasting time who should busy himself with inquiries as to what took place in the “darker” periods, when as yet the machinery of scientific investigation was miserably imperfect. It is interesting to separate the truth which this notion undoubtedly contains from the fallacy which lurks beside it. In one sense the sciences, and especially the natural sciences, may be said to be the growth almost of yesterday, since the machinery for exact observation, without which the inductive method cannot be adequately applied, only existed in very recent times; yet in another, and we take leave to say a higher sense, the advanced knowledge of to-day is distinctly the fruit of ages far removed in the past. Nay, more, our boasted science, ready though it be to treat with disdain the deficiencies of the older systems, is yet content in its careless ignorance to accept an inheritance which of all the bequests which antiquity could bestow is the most dangerous, the inheritance of a phraseology ill-understood, and of which we have lost the key.

It was, therefore, with pleasure, and with agreeable anticipations, that we proceeded, after reading Mr. Lewes's preface, to study the

body of his work. He has rightly regarded Aristotle as the father of ancient science; and as the historical development of scientific opinion is too vast a subject to be treated in any single work of moderate dimensions, he has doubtless acted wisely in selecting Aristotle's labours for illustration in the first instance. And we may say that so far as his conception of the proper mode of dealing with his subject allows, Mr. Lewes has executed his task most creditably. The amount of hard work to be gone through was necessarily very great; for, in regard to the biological treatises which form the greater part of the scientific works of Aristotle, it may be said that the classical scholars (at any rate in England) who have ever read them once through might be counted on one's fingers, and the difficulties of translation into intelligible and definite English are rather increased than diminished by such commentaries as exist. As far as we can judge, Mr. Lewes has brought to his task sufficient scholarship to enable him fully to master the literal sense of Aristotle's words. Whether he has always been equally fortunate in appreciating his ideas is perhaps more doubtful, as we shall hereafter endeavour to show. But there is another respect in which we must speak of this work, and that the most important one, in which we freely confess it has disappointed us not a little. Viewed as a first instalment of the much desiderated history of the growth of science it discourages us as to the prospect of so comprehensive a scheme being worthily carried out by our author; for, notwithstanding the principles clearly laid down in the preface, there is comparatively little to be seen, in this volume, of the true influence of Aristotle upon succeeding philosophers and men of science. It is true that Mr. Lewes favours us with a rather diluted Comtian exposition of the development of scientific thought from the earliest to the most recent times; and that he likewise devotes two consecutive chapters to the consideration of the general influence exercised on the progress of science by the methods of Plato and of Aristotle, in which, as might be expected from the declared principles of the writer, the elder philosopher fares badly. But even in these chapters, where the methods of Plato and Aristotle are expressly compared, we find no adequate appreciation of the influence of the master on the pupil; one of the first and most important objects, surely, in an examination of Aristotle as the chief representative of science in his own day, and the chief ruler of its progress for centuries after his own death. Yet this influence is constantly conspicuous in Aristotle's works, and in none more so than in some of the biological treatises which form the principal subject of Mr. Lewes's volume; and our author might have done good service by carefully illustrating this fact, and pointing out its effects, not only on the biological speculations of Aristotle themselves, but also on the mode in which they were interpreted by

subsequent philosophers. What we do get from Mr. Lewes is an accurate appreciation of the degree in which Aristotle's information in scientific matters, and particularly as to biology, forestalls or foreshadows the advanced science of the present day; in this respect the book is full of interest, and as it would be quite impossible to give sufficiently detailed illustrations, we can only recommend the author's observations in this matter as most candid and impartial, and in most instances, we believe, strictly correct. There are two chief features which our author remarks, in virtue of which the biology of Aristotle may be said to stand upon a level with the most advanced modern science, viz., his general conception of the nature of life, and his speculations with regard to the function of generation. The two treatises—the 'De Anima' and the 'De Generatione Animalium'—in which the views referred to are chiefly embodied, are particularly suited to bring out the qualities of a critic; they have tempted our author to show himself at his best, and also, as we venture to think, not unfrequently, at his worst as a commentator; we propose, therefore, as the subjects concerned are precisely those most likely to interest our readers, to make some remarks on Lewes's criticism of these treatises.

I. *Theory of Vitality*.—Mr. Lewes echoes the observation of Sir Alexander Grant, that a common misconception of Aristotle's  $\psi\nu\chi\eta$  has arisen in modern times; but it may be doubted whether he is right in ascribing the origin of this misconception to the influence of so modern a writer as Descartes, as he seems to do. He justly observes that the word cannot be fitly translated by the Latin word *anima*; its meaning is more comprehensive than this, and in some respects may be considered to include the meanings both of *anima* and *animus*. But he is not justified, we think, in his further statement, that Aristotle taught that mind is "only the highest form of life—one of the special forms of organic activity;" and, at the risk of seeming tedious, we must endeavour to show that in reality his doctrine was more complex.

The biological system of Aristotle's master, Plato, as expressed in the 'Timaeus,' was obviously little more than a fanciful sketch; nevertheless, it doubtless embodied opinions which were current at the period, or which were, at least, to be found floating in the atmosphere of contemporary speculation. It marks very strongly that conception of life as *an entity or entities inhabiting the organism* which is characteristic of the metaphysicians, and which was afterwards adopted by Galen, and by his powerful influence established as a cardinal doctrine of physiology. The double, or rather triple soul of the 'Timaeus' might have remained a mere fancy had it only been embodied in the spiritual philosophy of Plato; but in the hands of the stoic-materialist, Galen, it assumed a rigorous and definite shape, and henceforward nearly all medical and physiological

literature is full of allusions to the natural force, the life-force, and the animal force. And this tendency to the definite *embodiment* of vital principles was doubtless much increased when, at the revival of classical literature in the fifteenth century, Plato received fresh honours, and the 'Timaeus' found commentators who were already acquainted with Galen's physiological dogmas.

In a certain sense the great pupil of Plato was free from the theoretical dogmatism of the metaphysicians, and he occasionally caught glimpses of the conception that life is not to be considered as any entity or series of entities resident in the organism. He speaks of the vital principle as the primary reality of the organism (*ἐντελέχεια ἡ πρώτη σώματος φυσικῶν ὄργανικῶν*), and this expression appears to us to have a higher meaning than that which Mr. Lewes would seem to affix to it, if we may judge from his own definition of life (as the "dynamical condition of the organism") which he puts forward as the expression of that advanced modern thought with which "Aristotle is on a level" as to this question. With submission to our author, we believe that Aristotle's meaning was more philosophical than this. When he says that *ψυχὴ* is the "primary reality of an organized natural body," he appears to indicate that life is the sum of the tissues, *and* of the forces acting in them, as we should now express it, which compose a living creature. He expressly states,\* on more than one occasion, that tissues *without forces* cannot be called an "organism" at all, however symmetrical may be their arrangement, and implies that it is the body (or the organ) *plus the forces* that can alone receive that appellation. And life is not *in* the organism, but is *identical with it*, for it is the first *ἐντελέχεια*, the first reality or completeness of the organic tissues, which previously had only the *δύναμις*.†

Such is the conception of life which we believe to be the highest result of Aristotle's speculations; but he is by no means always consistent in the expression of it. He holds language which would make us believe that he recognised, after all, three distinct vital principles, the threptic (or nutritive), the orectic (or emotional), and the noetic (or intellectual), and he certainly seems to imply, in more than one place, that these principles, or some of them, are nourished by the inspiration of the *πνεῦμα*, a word which, in his writings, may sometimes be translated by its common meaning—breath—but sometimes also clearly means something different from this. What this something was, however, we know not, for the treatise on the *πνεῦμα* is lost. It is probable that the "Ether,"‡ which Aristotle

\* 'De Anima,' ii, 1.

† Οτι μὲν οὖν ἐντελέχειά τις ἔστι, καὶ λόγος τῶν δύναμιν ἔχοντος τοιονδι  
ἔιναι, φανερὸν ἐκ τούτων. ('De Anima,' ii, 2.)

‡ On this matter consult the 'De Generatione Animalium,' ii, 3; where he speaks of the generative heat of the sperm.

seems to have treated as a fifth element, is that which (when it has been inspired) he speaks of as the *πνεῦμα*, and which he says is the intermediate agent between the soul and body, which resides in the heart, and is by nature peculiarly fitted to cause movement. And yet there seems to be an obvious contradiction between such a notion as this and the simple and philosophic idea of life as the primary reality of the organized natural body."

Scarcely less perplexing is the language which Aristotle holds concerning the *νοῦς*, or intellect, and yet to our mind it is clear that his opinions were, on the whole, in favour of a different conclusion from that which Mr. Lewes seems to credit him with. When our author represents the Aristotelian idea of mind as being "only the highest form of life," he appears to directly contradict the plain sense of several passages which he himself quotes; more especially of one from the 'De Generatione Animalium,' in which the *νοῦς* is distinctly asserted to be separable from the body, godlike, and coming from without into the body. And there are many passages which speak unequivocally to the same effect, especially in the fourth and fifth chapters of the third book of the 'De Anima.' However desirous Aristotle may have been to simplify the facts of mind by treating them as a mere phase of the general life of the body, it is plain that he thought this simplicity could only be gained at the expense of truth. Man alone, he says, has anything of the Divine in him, or at least he has far more than any other animal possesses; and this Divine part he speaks of, repeatedly, as something which cannot perish, but is eternal. And he expressly declares, in the passage already referred to (De Gen. Anim. ii, 3), that the actuality (*ἐντελέχεια*) of the intellect has nothing in common with corporeal actuality. How are we to reconcile this statement with the theory that Aristotle regarded mind simply as the highest form of life—one of the special forms of organic activity? Mr. Lewes has failed, apparently, to appreciate the distinction (to which Sir Alexander Grant calls attention) between "the two modes of intellect which Aristotle recognises—the *νοῦς παθητικός* and the *νοῦς πονητικός*. These two modes are necessarily opposed to each other, as matter is opposed everywhere to form, and to all that gives form. The receptive mind (*νοῦς παθητικός*) which is as matter, becomes all things by receiving their forms. The creative mind (*νοῦς πονητικός*) gives existence to all things, as light calls colour into being. It transcends body, being capable of separation from it, and from all things; it is an everlasting existence, incapable of being mingled with matter or affected by it, prior to the individual mind. The receptive mind is necessary to *individual thought*, but it is perishable, and by its decay all memory, and therefore all individuality, is lost to the higher and immortal reason." In short, although there is a certain superficial truth in Mr. Lewes's statement about Aristotle,

that he lacked "a sense of the ineffable," it is certain that in presence of the great facts of consciousness his sceptical spirit was completely overmastered. We think it a great injustice to Aristotle to represent him as dealing with the universe like some haberdasher's apprentice, bent on tying up the various articles in his employer's shop into convenient parcels, and content to resign those which he could not manage to the care of any one who might have a larger stock of packing-paper, or a longer hank of twine. Yet something like this is what Mr. Lewes describes as the habitual attitude of his mind. To tell the truth, if we were inclined to accuse any one of "lacking a sense of the ineffable," it would not be Aristotle, but Mr. Lewes himself. There is about the whole of his chapter on the 'De Anima,' a certain hard dryness of treatment which fails, as we cannot but think, to give any just idea of the manner in which the Greek wrestles with difficulties which sometimes force him into apparent self-contradictions.

There is far less uncertainty in the position assigned to the emotions and appetites, and to sensation, of which they are the necessary consequence. Aristotle clearly thought that all this portion of the *ψυχὴ* was perishable, and inseparable from the material body. It is the strongly material aspect of the passions which leads him, in the first place, to undertake the examination of the *ψυχὴ* from the physical side; and it is probable that the superficial study of some passages which express this view strongly, has sometimes given rise to the mistaken notion that Aristotle's general position is materialistic. A curious fact which Mr. Lewes only briefly touches on in a foot-note might well have received a more careful examination in connection with this part of Aristotle's biology, viz., the undoubted predominance of materialistic views on the nature of the soul in the Christian Church during the first three centuries of its existence. Even Justin Martyr, whose Platonic tendencies are strong, and who makes a distinction between the "spirit of life," (which ceases to exist on the death of the body), and the soul proper, endows the latter with sensation, which remains after death. In fact, the exigencies of the Christian doctrine of punishments and rewards, as it was understood by the imperfect lights of that day, appeared to necessitate a belief in the materiality of the soul; and it was only very gradually that its immaterial nature came to be received, after the general belief had passed through a variety of modifications. In Tertullian we recognise pure materialism; in Origen we find the admission of a "comparative immateriality" of the soul; in Nemesius we arrive at a much higher stage of development; and in Augustine we have the doctrine of immateriality completely expressed. No sooner was Aristotle revived by the Arabians, than this tendency to immaterialism was greatly strengthened. Nothing can be more distinct and accurate than the opposition

between the Aristotelian and the *primitive* Christian theory of the separation of body and soul. The former supposes the capacity for suffering and enjoyment to cease at death ; the *νοῦς*, which alone is separable from the body, being destitute of sensation and appetite. The latter maintains the complete persistence of these faculties, independent of the fleshly body. But in later times, when Aristotle was forced into the service of the church, the ecclesiastical standpoint had entirely changed, and Aristotle's immaterialism only reinforced opinions which, through the Pauline teaching of Augustine and Athanasius, more especially, had become generally diffused throughout Christendom.

In spite of all its apparent contradictions, the psychology of Aristotle appears to us a work which, in its broad grasp of principles, is hitherto unapproached even by the latest systems which have been elaborated in the full light of modern analysis. The vigorous force of the conception of life as the *completeness of the body*—the sum as it were of the material and dynamic elements of its healthy function—is unequalled by anything which has been said on the subject before or since. And with regard to the apparent contradiction involved in the distinctly immaterial character which Aristotle ascribes to the *νοῦς*, we may call attention to a parallel fact which has, in our eyes, a very high interest. The battle between “*organicisme*” and “*spiritualisme*” has been lately renewed in France, as our readers are probably aware, with great vigour ; on the one side we hear the more literal adherents of positive philosophy asserting a coarse materialism which excludes the idea of mental freedom altogether, while, on the other hand, by a mere rebound from this excess, the spiritualist party have been encouraged to invade the domains of science, and threaten seriously to re-establish, in a dangerous degree of favour, the metaphysical method of studying biology. Amidst all this uproar it is a matter of satisfaction to observe that some cooler heads preserve their judgment. M. Rostan, a most distinguished physiologist, and an “*organiciste*” in the strictest sense of the term, has declared in his latest work his unshaken confidence in the immateriality and immortality of the thinking part of man ; which he regards as established by evidence with which physiology proper has nothing to do : in short, this philosopher of the nineteenth century, than whom no one more frankly accepts the necessity of a positive spirit in purely physiological investigations, recoils, as did the hardy and daring intellect of Aristotle, from the rash confidence of those who would limit the operations of mind to the narrow groove of a materialistic necessitarianism. No scientific physiologist can be ungrateful to the founders of the positive philosophy—a philosophy which has given so great an impulse to the best kind of biological investigation ; but many of the wisest and most liberal would deprecate the impetuosity of some neophytes

which leaps to a complete and simultaneous solution of corporeal and mental processes, and insists that everything shall be explained in accordance with the phenomena observed on one aspect only of the object of inquiry. It is this impetuosity\* that provokes the senseless reaction (as we cannot but call it) which is displayed in such productions as the recent clever and plausible article—"La philosophie de l'esprit"—which appeared in the 'Révue des deux mondes,' and still more in the ill-starred effort to rehabilitate the doctrines of Stahl which is at present agitating a portion of the scientific world in France. The mention of these disputes recalls us to the gravest defects of Mr. Lewes's volume. What our men of science need to know concerning Aristotle is not so much the extent or accuracy of his information as compared with modern knowledge, but the exact influence which he exercised upon successive generations, the detailed steps by which the numberless contradictory theories for which scientific theorists have made him responsible were extracted out of the Aristotelian writings or traditions. It is true that this could not be done within the compass of such a volume as that now before us; but even if he were unwilling to attack the whole subject at once Mr. Lewes might at least have given useful indications as to the special parts of Aristotelian biology which afterwards became metamorphosed into some of the most famous and influential medical doctrines.

For it was by no means Aristotle, *at his best*, who became influential with the physiologists of the dark ages of science. Such a philosopher, for instance, as Nemesius,† who may be said to have given the first foreshadowing of the merits and the demerits of that ecclesiastical influence on physiological trading which was to become so powerful, would naturally approach the perusal of Aristotle with certain predetermined principles of eclecticism; and accordingly we find that he extracted from Aristotle's writings the theory of the vital spirit being drawn from the venous blood by the suction of the arteries, and circulated in the latter vessels; a doctrine which he would be the more inclined to adopt, because it fitted well with the teaching on the subject of the vital principle which the first Hippocratic school—and subsequently the pneumatists,—had made popular, but which in fact had been earlier enounced by Heraclitus, and in part even by Pythagoras. The rage for reconciling Aristotle's doctrines with those of Plato, which especially beset the Neoplatonists and Arabian commentators on the former, also aided to give an abnormal prominence to those parts of Aristotle's writings which

\* As a sample of this quality, we may instance the review of M. Rostan's work, which appeared not long since in the 'Union Médicale.'

† Bishop of Emesa, 4th century, A.D., author of the 'De Naturâ Hominis,' which was at one time absurdly said to contain an anticipation of Harvey's discovery of the circulation.

appear to favour the conception of the vital principle as a distinct entity or entities superposed upon the organism. The powerful influence of Galen's philosophy of life (which was developed from a combination of the doctrines of Plato with those of Hippocrates) doubtless strongly predisposed subsequent commentators to find this kind of meaning in Aristotle's biological teaching. The consequence of all this misrepresentation or partial representation of his views was most unfortunate for science, for it strengthened precisely that tendency of physiology which was its greatest bane—the tendency, namely, to regard the principle of life as a proper subject for investigation apart from an accurate knowledge of the bodily organs. The student of medical history is familiar, in a general way, with the lamentable results which have flowed from this fundamental error in every department of medical science; but it may be questioned if many have yet realised the extent to which we are still trammelled by the inheritance of phrases representing ideas which were the pure inventions of a metaphysical biology. The most remarkable and lasting influence of this kind was probably exerted by the Arabian physicians, a fact which is specially interesting in connection with their well-known reverence for Aristotle whose opinions—so far as they knew them—were, in many cases, the acknowledged models of their own physiological speculations. The additions made by the Arabians to scientific physiology were trifling, if any; but as continuators of Aristotle, especially in regard to his doctrine of the *pneuma*, these writers deserve careful attention, for it was through them, more than in any other way, that his opinions exerted their powerful influence on the course of biological speculation. The eclectic principles on which the Arabians dealt with such portions of Aristotle's writings as they were acquainted with, is well shown in the works of Thophail, of Avicenna, and others. "Siehe da" (says Sprengel, after quoting Thophail's description of the *pneuma* and its part in the functions of life) "die Verbindung der Alexandrinischen Philosophie mit dem Peripatetischen System!" This is a most suggestive observation. It is by their combination of Aristotle's pneumatism with the supernaturalism of Alexandria and the East that the Arabians form a true developmental link between the ancient physiology and that great reformation of medical philosophy in the sixteenth century of which, with all their errors, Paracelsus, and Van Helmont were the leaders. For this doctrine of the *pneuma* will be found by the student to underlie all the great problems of physiology as they were agitated in the dark ages of physiology, before anatomical research had received the impulse communicated to it by the great anatomists of whom we reckon our Harvey the chief. It must not be forgotten, either, that the Arabians, though they cannot be said to have originated many scientific ideas, were great coiners of scientific phrases, and many of these

phrases have enjoyed a permanence altogether out of measure with their true value : a fact which can be readily ascertained by reference to the works of Avicenna, or to the 'Index' of his commentator Palamedes.

We have said enough to indicate a large field of inquiry which Mr. Lewes might usefully have opened, and which, in a work intended to illustrate the relations of Aristotle to modern science would, in our humble opinion, have advantageously supplied the place of much which we find in the volume before us. The personal opinions of Aristotle on the deep questions of life are highly interesting in themselves. But for the purposes of a history of science we submit that it is really quite as important to trace the modifications of Aristotelian biology in the hands of his principal and most influential commentators, such as the Neoplatonists, the Arabians, and the Schoolmen ; for these are the means through which his influence really came to rule the scientific world.

II. *Theory of Generation.*—Mr. Lewes has, we think, found a task more suited to his genius, and to his studies in natural history, in the criticism of the wonderful treatise on generation, than in analysing the singularly complex speculations of the 'De Anima.' His own views on generation and development happen to be interesting, and he has found a congenial task in proving these views to be the result of our most advanced knowledge, and at the same time indicating that the extraordinary prescience of Aristotle had to a considerable extent forestalled some of these conclusions of recent science. Among the most remarkable instances of this scientific foresight he has justly placed Aristotle's unhesitating enunciation of the doctrine of *Epigenesis* in foetal development ; that is to say, the doctrine of "a primitive amorphous germ becoming an organism through successive modifications, each modification being the cause of others—part being added to part, not simply in the way of addition, but each being the product of some predecessor, and the cause of some successor." This theory has only acquired the support of the facts necessary for its proof in the exact researches of recent embryologists, yet Aristotle's description of the successive developmental stages of the embryo is substantially correct. He speaks of the embryo living at first the life of a plant, and only subsequently acquiring the sensitive and intelligent soul. The embryo is the representative of the sperm and the seed, which respectively contribute to its formation, the sperm also being the primary motor of development, the influence of which continues long after the primary impulse has ceased. We have heard it remarked, by one whose opinion is well worthy of attention, that one of the most surprising features of Aristotle's genius is the circumstance that even in speculations where of necessity his primary observed "facts" were incorrect, his conclusions are right and good :

and though this may be considered an extreme statement, it certainly derives a plausible support from the results to which he was led in speculating with most imperfect means of observation, in the processes of generation. For instance, it is extremely singular to remark the process by which he arrived at the conception of the respective shares in the work of conception performed by the male and the female; for he was without any knowledge of the true function of the ovary, or of the nature of the ovum, and regarded the catamenial fluid as the female analogue of the sperm. This idea was of course incorrect, the catamenial fluid does not, *necessarily*, contain an ovum at all, at most it is the *accidental* attendant of the discharge of a mature ovum, and is in no way essential to that process. Yet the influence of the mistake was rather fortunate than otherwise, since it confirmed him in the belief to which other observations inclined him, that equal though different shares are borne by the male and female in the work of reproduction. And we distinguish the same power of scientific imagination in the description which he gives of the fetus, while still only potentially an animal, deriving its food from the uterus by the ramifications of the umbilical vessels, as a plant derives its food from the earth; this recognition of the uterus as a place of nutrition for the foetus, which he establishes by reference to the non existence of the organ in oviparous animals, is a master-stroke in its way, and considering the general tone of scientific speculation in Aristotle's time. But his most consummate effort of this kind is the explanation which he gives of hereditary transmission. After describing most ably the principal variations in the transmission of parental features, and the circumstances under which they occur, he observes that the cause of all these variations is the resistance opposed to the motor impulse by the material moved; just as the edge of a tool is blunted by that which it cuts, and the heating body is cooled by that which it warms; and he proceeds to demonstrate in the clearest way that no variation of hereditary transmission ever gives the human offspring other characteristics than those of its species; thus the monstrosities which sometimes occur, in which there is an appearance of the blending of the characteristics of some other animal with those of the human race (like the "pig-faced lady" of our day) are never really animal in any one of their limbs or features; they merely present the results of a too greatly arrested development. "How impossible it is for one animal to have the parts of another is evident from the differences in the periods of gestation of men, sheep, dogs, and oxen. Each can only be formed in its own definite period."

The theory of generation propounded by Aristotle is a splendid and consistent whole, the value of which is not seriously diminished by such errors as crept into it through his imperfect means of observation. There is less of gratuitous teleological speculation in

it than in almost every other work of his with which we are acquainted, a characteristic which is closely related to the greater fulness of real knowledge displayed in it. But it was impossible that Aristotle could free himself, even in this noblest of his scientific works, from the universal tendency to metaphysical explanations of vital processes; and accordingly we find that in his theory of the nature of sperm the pneuma plays a great part. Not that Aristotle originated the doctrine which he here propounds—that the sperm contains a spirit\* analogous to the element of the stars—on the contrary, it had already been put forward by the Pythagoreans: but the weight of his confirmation greatly assisted to give it that prominence which it constantly assumed in subsequent biological systems. Here again the *post-nati* have been true to their usual ill-luck as commentators on the Stagyrite, and have conserved this bit of metaphysical biology with jealous care, while almost wholly neglecting the store of genuine observations and philosophical reasoning which the treatise on generation contains. This doctrine of the quasi-divinity of the sperm gave one more excuse to neo-platonic commentators to declare that there was no disagreement between the physiological system of Aristotle and those of the Pythagoreans and of Plato. It came out with great force in the biological theories of the Stoics; it was adopted with lively appreciation by the Arabians, to whose Oriental spirit it was particularly congenial; and it reappeared in the *Summa* of Thomas Aquinas, in which it is represented by the “*principium corporis formativum*.” On the minds of those who represented physiological science in the melancholy period which intervened between the death of Galen and the great revival of anatomy, the notion of this spiritual character of the sperm exercised an extraordinary attraction, from the mystery which enveloped the subject on every side. And thus all minds were prepared to receive without surprise the extravagant developments of the Pythagorean theories as to the sperm promulgated by Paracelsus and by the Rosicrucians and other mystics of the 16th and 17th centuries.

Such are the important relations of Aristotle's pneumatism to the progress of the theory of generation. We must again express our feeling that Mr. Lewes commits an error in limiting himself to the record of Aristotle's own opinions: with regard to this very subject of generation, for instance, it would have been far more useful, if time and space would not serve for both purposes, to have traced out thoroughly one or two leading ideas (like that of the pneuma) by means of which Aristotle's influence was carried down to his successors, than to limit the discussion to questions as to the exact amount of science which he possessed.

Our space will not permit us to discuss Mr. Lewes's criticisms on

\* Πνεῦμα, καὶ ἡ ἐν τῷ πνεύματι φύσις ἀνάλογον οὐσία τῷ τῶν ἀστρων στοιχειώ.

the ‘*Parva Naturalia*,’ but with regard to one of these treatises—the ‘*De Memoria*’—we must declare our opinion that Sir W. Hamilton’s estimate of its meaning and value, though doubtless exaggerated, was much nearer the truth than the contemptuous flippancy with which it is treated in the volume before us, and which makes us gravely suspect that the author has not given to this difficult but most interesting treatise that careful study which we willingly admit he has bestowed on other parts of his task. The whole subject of the ancient doctrines, and particularly those of Aristotle, with regard to memory, is worthy of being taken up entirely afresh by Mr. Lewes, or by some competent scholar and physiologist ; and we would counsel the individual, whoever he may be, who shall undertake this task, to put himself through a severe preliminary training, with a view to the eradication of habits of neat and effective writing.

And now we must hasten, before concluding this notice, to make some observations on the general estimate of Aristotle’s scientific worth which Mr. Lewes presents to his readers. It appears to us that our author is agitated by two contending influences, the action of which upon his mind was inevitable, considering the point of view from which he approaches his subject, but the effect of which has been somewhat prejudicial to the complete appreciation of Aristotle’s science. He is not destitute of generous sympathy for the prodigious intellectual efforts of a great man fettered in all his inquiries by the want of an efficient apparatus of observation, and he has penetration enough to see that the scientific genius of Aristotle enabled him to perceive the necessary conditions of that very inductive philosophy of which we moderns boast as the peculiar glory of our times. But he allows his inordinate veneration for the modern school of positive philosophers to seduce him into a forgetfulness of the difference between *conceiving* and at once *correctly applying* a method which leads him occasionally to give expression to a condescending pity for the labours of the great philosophers of antiquity, and similarly even for those of Bacon, which is unjust and uncalled for. Although himself a professed exponent of the doctrine of organic development of scientific principles, he ignores too much the services of those who broke up the rough ground and prepared it to receive the seed of science. As he is unjust to Plato’s splendid labours in the analysis of the subjects of philosophical inquiry, so he is unduly contemptuous of Aristotle’s experiments (which we believe were most necessary and most useful even when barren of immediate practical results) in the employment of teleological speculation ; and so, also, he pronounces judgment with too little consideration on Bacon’s “neglect of the process of verification.” Moreover, he manifests a certain inability to comprehend the “inconsistencies,” which doubtless are a feature in many of Aristotle’s greatest works, which is hardly worthy of a

philosophical critic. The world has been so long in arriving at a general recognition of the fact that truth is many-sided, that it can ill afford to be seduced, at this time of day, into the belief that it has now attained to the one and only true method of knowledge, and that the great minds of antiquity are to be convicted of imperfection on the evidence of their painful balancing of views which seem to us mutually antagonistic, but which we may even yet learn to recognise as but the golden and the silver sides of the shield. There is something specially English, we fancy, in the tendency to believe in a best of all possible philosophies ; it is a peculiarity which resembles the tenacity of belief with which we venerate our present political constitution and our present fashions in cookery. But our space is exhausted ; and in taking leave of Mr. Lewes, we desire to express our sense of the great value of his book, a value which cannot be measured adequately by a merely critical estimate of its contents. For although we can hardly regard it as a complete and final settlement of Aristotle's relations to the progress of science, still there is so much matter in it that will be quite new to many readers, and which when read can hardly fail to stimulate their interest in the origin and development of scientific opinions, that we anticipate the best results from its publication. It is almost superfluous to say that the work is written in a clear, lively, and pleasant style. Mr. Lewes is a thoroughly skilled litterateur ; and we need hardly add that Messrs. Smith and Elder understand as well as any one the art of turning out a handsome volume, and that the present work is an excellent sample of their skill and taste. That the combined attractions of intrinsic worth and of a pleasant external form may recommend the work to a numerous public, and thus aid in diffusing a taste for inquiries into the history of science, more especially among medical men, is devoutly to be desired ; and with that aspiration we will conclude this paper, in which we have given but a feeble expression to suggestions which we nevertheless believe might be developed and expanded with lasting benefit to the ideas of the medical profession as to the true development of science.

F. E. A.

*Clinical Observations on Functional Nervous Disorders.* By C. HANDFIELD JONES, M.B. Cantab., F.R.C.P., Physician to St. Mary's Hospital. London : John Churchill and Sons, 1864, pp. 585.

*Practical and Pathological Researches on the various Forms of Paralysis.* By EDWARD MERYON, M.D., F.R.C.P. London : John Churchill and Sons, 1864, pp. 215.

THE chief value of the books before us consists in the attempts of their authors to read by the light of the most recent physiological investigations the pathology of disorders of the nervous system, and to lay down (so far as our present knowledge will allow) a clearer and better defined plan for their treatment than that which we have hitherto possessed.

Dr. Handfield Jones confines his observations to "Functional Disorders of the Nervous System," *i. e.* to disorders in which there is no *manifest* organic lesion of any part of the nervous system; but, as he truly adds, the probability is that no such disorders really exist—"that in all morbid action the cells and fibres of the organs undergo some molecular change from their perfectly normal condition."

In his opening chapter on "General Pathology," we have an able outline of this branch of medical science, so far as it is connected with the questions to which our attention is to be immediately directed. Though the laws of isolated conduction of nerve-fibres (in the peripheral tracts), and of reflex or excito-motory action (through the nervous centres), have been long established, we must recognise the additional value conferred on the latter law by the conclusions which Pflüger's observations appear to justify, as to its important bearing on Pathology, *viz.* :—

(1.) "That when reflex action occurs on one side, it is always on that where the sensitive nerve has been excited; and if it occurs on both sides, it is strongest on the side stimulated. (2.) When reflex action occurs on both sides from excitation of one, it affects parts symmetrically situated. (3.) Reflex excitation in cerebral nerves extends from before backwards, in spinal nerves from behind forwards."

That *unfelt irritation* may produce morbid phenomena affecting the nervous system is now beyond a question. The observations of Brown-Séquard on certain forms of insanity, vertigo, epilepsy, chorea, &c., place this point beyond a doubt; and the case given by Dr. Graves, in which obstinate bronchitis was instantly cured by the expulsion of a tape-worm, proves most convincingly how the

Suppression of irritation (otherwise imperceptible) may be speedily followed by the relief of most distressing symptoms.

The theory of inhibitory influence is next brought under our notice. Pflüger attributes this influence to a certain set of nerve-fibres whose sole function is to arrest or diminish action. Lister, on the other hand, concludes "that one and the same apparent nerve may, according as it is operating mildly or energetically, either exalt or depress the functions of the nervous centre on which it acts." The effect of mechanical irritation of the medulla oblongata and spinal cord, as recently observed by Hufschmidt and Moleschott, appear to confirm Lister's explanation of the operation of this peculiar influence. Our author's view on this point differs somewhat from that of Lister's, since he regards the exhibition of inhibitory influence as depending on the nature of the impression made on an afferent nerve, rather than on the energetic operation of the nerve itself; but he appears to modify this conclusion, since he allows (p. 13) that "it depends very much on the condition of the nervous centre which is affected what the result of a nervous stimulus shall be, whether paralysing or exciting."

In opposition to this theory it is maintained (as by Brown-Séquard, in reference to certain cases of reflex paralysis) that the paralysis depends not on the direct morbid influence of the irritation on the tissues of the nervous centre, but on the anaemia of its vessels consequent on paresis of the vaso-motors resulting from the irritation. But the cases quoted by Dr. H. Jones appear to be at variance with the explanation of these phenomena as given by Brown-Séquard. In one case, paralysis of the rectus externus muscle of the left eye, accompanying a whitlow on the last phalanx of the left thumb, disappeared soon after the removal of a piece of dead bone from the whitlow. In another, amaurosis ceased on the extraction of a carious tooth after total loss of sight for thirteen months. Such instances of paralysis may fairly be designated inhibitory; and yet, as our author says, "it is difficult to suppose that spasms of reflex action should be limited to such a small extent of vessels" (in accordance with Brown-Séquard's theory) "as would be involved in some instances, *e.g.* palsy of the sixth nerve," or occlusion of the arteria centralis retinæ for thirteen months.

The special function of the sympathetic nerve, in relation to the blood-vessels, offers for our consideration many points of great practical interest. It is well known that there is a loss of temperature in parts affected by paralysis of the cerebral and spinal nerves. Bernard's experiments, on the other hand, prove that an increase of temperature results from division of the sympathetic nerve, and that the temperature does not diminish with the subsidence of the hyperæmia which at first manifests itself. For this reason, as well as from the fact that hyperæmia supervening on

division of the fifth nerve is accompanied by a loss of temperature, Bernard is opposed to the opinion maintained by Brown-Séquard and Waller, that the increase of temperature in a part is due to an increased flow of blood to that part; and he is confirmed in this conclusion by the observation that in *healthy* animals division of the sympathetic is not accompanied by any tendency to inflammation. According to Dr. Handfield Jones, the increase of temperature is probably due to the increased tissue change which results from division of this nerve, as proved by the experiments of Brown-Séquard, who observed that it was followed by an augmentation and greater persistence of sensibility; that the sense of hearing was more dense, the glandular secretions increased, and the occurrence of chloroform anaesthesia retarded; whilst in the parts immediately affected the convulsions consequent on poisoning by strychnine first manifested themselves. That division of the sympathetic paralyses the arteries, and so causes their dilatation, is doubted by Bernard, but maintained by our author, who thinks that this paralysis promotes greater activity of the circulation, owing to the diminished obstacle presented to the heart's action by the paralysed walls of the vessels. Thus, says Dr. Handfield Jones, "the old phrase, 'great arterial action,' descriptive of a large and bounding pulse, when translated into correct physiological language, means, of course, great *cardiac* action with *a want* of arterial."

We must thus conclude that the sympathetic nerve, by modifying the circulation, exerts a great influence on the function of nutrition, and the vaso-motor nerves present points for our consideration of great pathological interest in all disorders attended by an alteration of the circulation. But it must be asked whether or not the sympathetic alone exerts this influence on the current of the blood. Clearly not, since the experiments of Ludwig and Bernard prove that stimulation of the third division of the fifth pair, and of the facial, promotes an increased flow of saliva, while at the same time the circulation in the gland is accelerated. To such an extent is the function of nutrition directed by the nervous system that Samuel thinks there is a special set of nerve-fibres (centrifugal and centripetal) charged with this controlling power; but Dr. Handfield Jones combats this idea, and considers it more probable that the same effect may be produced through ordinary motor and sensory nerves. This latter view is strongly corroborated, as he observes, by the atrophy of the hands and feet which occurs as the result of the anaesthesia of Indian leprosy.

Dr. H. Jones then proceeds to apply these principles to the pathology of fever, the essential phenomena of which are increased temperature, prostration, and derangement of the nervous centres; disorders of the secretions, and impairment of nutrition generally. In fever of a low type a parotic condition of the sympathetic will

explain the increase of temperature, and the relaxation of the arteries ; which, as well as the hyperæmia of various viscera, may be regarded as natural results of such a paralysis. To the diminution of this controlling power may be attributed the increase of urea, partly as the result of the augmented chemical changes going on in the blood (considered as a solid tissue), and partly to the increased secreting power of the kidney. Similarly we may explain the hypertrophy of the glandulæ solitariæ and agminatæ in typhoid fever. The feebleness of the heart's action proves how much its vital energy is depressed, and the tendency of the skin to slough evidences the general impairment of the nutritive functions.

In fever of a sthenic type bloodletting may be absolutely necessary for the preservation of life ; and it is therefore evident that we have to deal with organs in a condition wholly opposed to that which exists in low fever, in which stimulants are absolutely essential for the maintenance of life. If we suppose the poison limited to the sympathetic system, an increase of heat will result, accompanied by a tendency to local congestion. The increased temperature of the blood will act as a stimulus to the heart, the tissue of which is vigorous and capable of responding energetically. The acceleration of the pulse is thus explained, but its hardness implies a contracted state of arterial coats. How is this consistent with a presumed palsy of the sympathetic system ? " It is to be remembered that arterial dilatation is by no means inseparably connected with increased blood-heat ; that the latter persists when the hyperæmia, which the former occasions, has materially subdivided. In sthenic fevers it may fairly be presumed that the arterial coats, like the heart, retain for a time excitability, and contract therefore moderately under the direct stimulus of the rapid blood-current which traverses them. The pulse is therefore hard. In low fever, on the contrary, the pulse is soft, because the poison impairs at once the vital power of the arterial coats, as well as that of their vaso-motor nerves."

Pyrexia is probably the result of a morbid impression conveyed from an inflamed part to the sympathetic centres, followed by (as the effect of reflex inhibitory action) feebleness of the vaso-motor nerves, and increased cardiac action ; but we must remember that occasionally (p. 11) such irritation will produce paralysis of the musculo-motor nerves. This view of the origin of pyrexia will explain the worse than useless employment of tonic and nervine medicines in this form of fever, since such medicines are generally tissue-irritants, and can therefore only intensify the morbid impressions conveyed to the nervous centres. Hence we obtain a valuable confirmation of one of the leading truths of medicine, viz., that the types of disease are manifold, that each must be carefully studied and recognised, and that the remedies suitable to each must be

employed accordingly; for such must be the aim of the skilful physician.

The relation of neuralgia to malarious fever is next discussed. Dr. H. Jones regards them as identical in origin, the variation of symptoms being dependent on the nature of the part attacked by the poison. In the former it appears to settle upon the cerebro-spinal nerves, as evidenced by the existence of acute pain; in the latter, on the sympathetic system, to which he refers the paroxysms of fever that attend it. Romberg, who uses neuralgia and hyperesthesia as convertible terms, supports the popular theory that neuralgia implies an excited or over-active condition of the sensory nerves. But a consideration of the circumstances that attend it, the nature of the remedies, and its relation to other disorders, leads Dr. H. Jones to an opposite conclusion. The exciting causes are malaria, exposure to a draught of cold air, or excessive fatigue. Debility and prostration are symptoms nearly as marked as the pain, which increases with increased prostration; and the only means for obtaining permanent relief are the enjoyment of fresh pure air, good food, and sufficient repose—remedies which are beneficial to the extent that they give tone and strength to the patient. The cure of neuralgia by Faradization is quoted as an illustration of its nature; and Dr. H. Jones concludes (correctly, as we believe) that its origin is due far more probably to deranged and disordered nutrition than to exalted excitability of the affected nerves.

In answer to the question whether the nerves or the centres are the *seat* of neuralgia, Dr. H. Jones tells us that his observations lead him “to admit the possibility of very numerous exceptions to the law of eccentric phenomena, and to believe that pain in a nerve may really indicate by its situation the seat of the irritation, or rather, morbid action. This is a conclusion of some importance to the local treatment of neuralgia. It justifies our empirical habit of applying sedative remedies as near as possible to the (apparent) seat of pain.”

The choice of remedies for neuralgia must depend on its pathological relation in each case, and will be determined by the cause which gave rise to it. Thus a rheumatic origin points to the use of iodide of potassium, or muriate of ammonia; iron, quinine, and arsenic are indicated where the prevailing diseases are of a malarious type. In all cases of nervous disorders, we must bear in mind two prominent facts, viz., that the excitability of nervous tissue is in direct proportion to its debility,—and that an aggravation of the disorder is usually first apparent at night. The catamenial period also is frequently marked by an increase of the symptoms.

With the exception of a brief allusion to the chapter on “Remedies,” we must here take leave of Dr. H. Jones’ work. The intermediate chapters are practical commentaries on the principles

of "General Pathology," which we have attempted to summarise. The whole well deserves most careful study; but we would especially direct attention to the remarks on cerebral and spinal paresis. The value of the lesson to be taught, and the wisdom of the teacher, are alike well indicated in the following passage (p. 53):—"But to endeavour to prove that all phenomena involving motion and sensation, physiological and pathological, are of the same kind, seems to us contradictory to familiar facts, and we cannot consent to take any such principle for the basis of our practice. If prolonged experience convinces us more and more of any one thing, it is of the utter diversity and radical dissimilarity of many pathological states and symptoms, called by the same name, and outwardly seeming much alike. It is the fashion of the day to refer all disease to diminished vital action, and to assume (I think very unfairly) that previous authorities have always referred it to increased. It would be more correct to say that disease has been ascribed to deranged or perverted vital action, which may be increased or diminished. Beyond this, I believe, we have not advanced yet."

The chapter on "Remedies" is a valuable addition to Dr. H. Jones' work, because it attempts to explain (as it does, we believe, for the most part satisfactorily) the *modus operandi* of several of the most valuable drugs in our Pharmacopœia. Homœopathy owes a great part of its success to the claim advanced by its professors, that they clearly understand the workings of each of their (so-called) remedial agents. Whilst on this point, we for our part have been compelled to confess (to ourselves at least) our ignorance, and to rely mainly on empiricism. We must, therefore, acknowledge with gratitude the efforts of a philosophic mind to lay a sure foundation for our plan of treatment; and this we believe our author to have done, by skilfully availing himself of our increased knowledge of chemistry, physiology and pathology. According to his views, *quinine*, as a "nervine tonic," exerts its influence primarily on the nerves of the vaso-motor system. "Thus in pneumonia of a low type, where the lungs are gorged with blood, in asthenic rheumatic fever, in some cases of typhoid and typhus fever, in chronic relaxation of the uterus, attended with menorrhagia and leucorrhea, in bronchorrhea, and in a multitude of analogous conditions, where vascular atony is marked, quinine may be given with the distinct view of toning and contracting the minute arteries and so arresting hyperæmia and exudation, while at the same time it elevates the power of the cerebro-spinal system." *Arsenic*, which belongs to the same class of remedies, appears to act in a similar manner to quinine, and it is thus that Dr. H. Jones explains its remedial value when used in the treatment of cases of malaria, eczema, chronic diarrhoea, &c. According to the French Commission, it "has unquestionably the property of reducing engorge-

ments of the spleen." In chorea, it probably acts through the cerebro-spinal system, and in asthma, through the vagi nerves. But in the use of both arsenic and quinine, we must bear in mind the property of each as a "tissue-irritant." All injurious tendency may, however, be obviated by a judicious combination of these drugs with others. Thus, in asthenic pneumonia quinine may be given with antimony, whilst arsenic may be combined with a saline, where there is any tendency to inflammatory excitement, or with Tr. Cinchonæ, where there is great depression, or with opium, to obviate intestinal irritation. *Iron* (of which the most useful forms are the saccharated carbonate, and citrate of iron and quinine) exhibits its chief effects by improving nutrition, raising the animal temperature, and increasing the secretion of urea, as well as the weight of the body. The action of *strychnine* on the motor nerves of the cerebro-spinal system is its most perceptible result; but that it does also influence the sympathetic system is manifest from the stimulating power that it exhibits in the production of the contraction of the uterus, the arrest of vomiting in certain cases of irritability of the stomach, and the occasional removal of formidable symptoms of obstruction, resulting from torpor of the intestines. "*Digitalis*," says our author, "in the milder degrees of its action, has a stimulating influence upon the heart, acting through the medulla oblongata and spinal chord, or the cardiac nerves proceeding from them; its stronger action has the reverse effect, like galvanism or mechanical irritation, arresting the heart's movements." Clinical observation of the effect of this drug appears to support these conclusions, since in some cases of severe epistaxis, of pulmonary hæmorrhage (in doses of  $m$  30 to 90, 6 tis vel 4 tis horis), and of otherwise intractable neuralgia, digitalis has been found to be a most valuable remedy. A case recorded by Dr. Wilks,\* and quoted by Dr. H. Jones, offers a most instructive lesson. The patient, who had long suffered from disease of the heart, was apparently *in articulo mortis*, consequent on a severe flooding after labour. Brandy and ether had failed to revive her; but after seven doses of Tr. Digitalis ( $m$ xxx omni hora) she recovered.

Dr. Meryon, following the observations of Lockhart Clarke, Du Bois Reymond, &c., commences his work with a sketch of the minute anatomy of the cerebro-spinal system, and the nature of nerve force, as well as of the function of the sympathetic nerve.

In the chapter on paralysis from affection of the spinal chord we would especially direct attention to the remarks on myelitis. The diagnostic symptoms (p. 35) are well sketched out, and the indications for a prognosis from the part immediately affected are clearly established (p. 36). Inflammation of the cervical portion of

\* 'Med. Times and Gazette,' 16th January, 1864.

the spinal chord threatens the most immediate danger, owing to the special function of the nerves of respiration which proceed from it. Myelitis in the dorsal region presents a more unfavorable prognosis than when it attacks the lumbar portion; and when the patient retains command over the rectum and the bladder the case is still more hopeful. In concluding this chapter, Dr. Meryon reviews the ingenious theory of Stromeyer, that the ordinary form of scoliosis, or lateral curvature of the spine, is dependent on partial paralysis of the muscles of respiration, and this theory appears to be supported by Sir C. Bell's observations on the office and relations of the *Sterno-cleido mastoideus*, the *Trapezius*, and the *Serratus magnus Anticus* muscles.

Paralysis from reflex action is regarded by our author as the result of a disturbance of the special function of the sympathetic nerve, influencing either the vessels of the nervous centres or those of the palsied muscles, and thus depriving them of the nutrition which is necessary for the performance of their function. Intestinal irritation (from worms, &c.) and uterine disorders are well recognised exciting causes of paralysis, and Mr. Stanley some years ago drew the attention of the profession to a case of irritation of the spinal chord in connection with disease in the kidneys. In confirmation of Mr. Stanley's suggestions, Dr. Meryon gives the history of a case treated by Dr. Gull, but which indicates disease of the bladder as the exciting cause, rather than disorder of the renal organs. Nor is it clear that the diseased condition of the bladder was not owing to unskilful use of the catheter. Consequently any conclusion derived from it must be unsatisfactory; but, though paralysis supervened about three weeks before death, "the cord had the normal size and appearance, and neither to the touch nor on section presented any obvious softening."

An interesting illustration of paralysis, from reflex action, has lately come under our own observation. The patient, æt. 30, usually enjoying good health, was seized with an attack of hemiplegia of the right side (with complete loss of sensation on the side affected), about two months ago. The attack commenced at 10 a.m. Sensation returned in about five hours; but the complete restoration of the motor power did not occur till her child (the second) was born, a fortnight afterwards. The birth of the first was not preceded by any similar symptoms. Her mother, however, had died from apoplexy, and her married sister suffered from an attack of mania, previous to her first confinement.

The diagnosis of this form of paralysis, as distinguished from paralysis arising from organic disease of the nervous centres, or their investing membranes, is most important. Dr. Meryon's observations on this point entirely coincide with those of Brown-Séquard.

The following are the chief diagnostic points to be noted in the history of the disorder :

I. It is preceded by symptoms indicative of an affection of some other part of the body.

II. It generally varies in degree according to the variations of the exciting cause.

III. It is usually incomplete, some muscles being more paralysed than others.

IV. It is seldom accompanied with spasms in the paralysed muscles.

V. The pains in the course of the spine, the formication, flying pains, and pricking sensation, described in cases of myelitis, do not appear in reflex paralysis.

VI. There is seldom anaesthesia.

VII. The excito-motor power of the paralysed muscles is generally retained.

VIII. Convulsive movements are not so apt to be excited by defecation and micturition as they are in myelitis.

IX. The restoration to healthy power is often rapid after removal of the exciting cause.

The prognosis, of course, is most favorable in those cases in which the exciting cause can be most easily removed. The comparatively slow approach of the paralysis, and the existence of hemiplegia, rather than paraplegia, are favorable symptoms so far as the prognosis is concerned. That the treatment may be effectual, we must remove the exciting cause. Local sedatives, especially belladonna, will allay the morbid impression on the incident nerves ; and to restore the circulation in the palsied organs, we cannot do better than resort to the internal use of strychnine. Galvanism and mineral sulphur baths are most useful remedies ; and in accordance with the valued teaching of Schroeder van der Kolk, that "the sensitive branches of a spinal nerve run to the part of the skin which is moved by the muscles receiving motor filaments from the same nerve trunk," we must remember that our local remedies will be most effective when applied as either sedatives or excitants to those incident nerves which are bound up in the same nerve-trunk with, and transmit their own impressions to, the motor nerves of the palsied muscles.

We must here conclude this brief notice of the works before us ; but we cannot do so without offering our hearty thanks both to Dr. Meryon and Dr. Handfield Jones for their valuable contributions to the practical literature of our profession.

C. J. B.

*Medical Errors. Fallacies connected with the application of the Inductive Method of Reasoning to the Science of Medicine.* By A. W. BARCLAY, M.D., pp. 123. 1864.

MEDICAL reasoning is, like Falstaff, a subject at which everybody delights to gird ; it is not only feeble and illogical itself, but it is the cause of much feeble and illogical writing. As delicate children are sometimes blasted and early perish by reason of water on the brain, so medical logic appears to have suffered a fatal blight and to be likely to come to an untimely end from an induction on the brain. It is now, we believe, definitely settled in medical science that a man sees *with* his eye and not *through* it, and that the preacher, with prophetic vision, foresaw this great truth when he exclaimed : "What superiority hath a man over a beast?" Prudently cautious observers decline to venture on any theory as to the functions of the cerebral convolutions, though they doubt not that, like the nipple and the mammary gland in the male animal, they must have some great final cause in the mysterious purpose of nature. That the heavens are everywhere above the earth is, in reality, one of those ill-grounded fancies which theoretical and unpractical people are so prone to form : how can the trustworthy man of observation and facts admit so rash an hypothesis when every spot on earth's surface has not been visited and the heavens gazed at therefrom ? Assuredly, the "apes by the Dead Sea" have for some time had matters all their own way.

It was with some interest that we opened this book on 'Medical Errors,' looking for no less than an exposure of the miserable and petty system now so much lauded in medical investigations as the inductive method, or the Baconian method, though it has nothing whatever of true induction in it, and though its pretensions are a foul slander on Bacon's great name. But we are sorry to say that we have been grievously disappointed. The book will not fail to convey to a competent critic the impression that its author has had to learn his lesson in order to teach it, and that he has not succeeded in learning it very satisfactorily. The student of Mill's 'Logic' will easily recognise with whose heifer Dr. Barclay has ploughed ; and it will cause him no little surprise and amusement to perceive how innocently Dr. Barclay has stopped on the very threshold of his subject. He has got in his studies as far as the Method of Agreement, and has then broken down or given up under some singular delusion that he had got to the end of his matter. Of the three other methods—the Method of Difference, the Method of Residues, and the Method of Concomitant Variations, which are modes of direct

induction, he gives no account in a book professedly devoted to the exposure of fallacies in the application of the inductive method. And yet it is the fact that most fallacies positively arise from the sole use of the Method of Agreement, which never can lead to laws of causation by itself, which leads only to uniformities of sequence, and which, therefore, is chiefly used in suggesting cases for the application of the Method of Difference. Only by laying down distinctly the rules to which inductive arguments must conform in order to be conclusive, could the fallacies of erroneous induction be displayed. "Some men," said Milton long ago, "are born to prey upon and to spoil great authors." Or, as a noble author has observed in his 'Characteristics,' "the most ingenious way of becoming foolish is by system."

The consequence of Dr. Barclay's premature conclusion of his studies of Mr. Mill may easily be imagined. Having entirely failed to grasp his subject, he deals out swelling phrases that are almost empty of any meaning. Thus, for example, we are told over and over again, with a cuckoo-like repetition, that "a true induction is one which establishes a law of causation;" but however anxious we may naturally be to ascertain how a law of causation may be known to be such, we shall not learn that from Dr. Barclay's book. It is evident that Mr. Mill must have had in his mind's eye the possibility of such a writer, when, after saying that "every well-grounded inductive generalisation is either a law of nature or a result of laws of nature, capable, if these laws are known, of being predicted from them," he goes on to add:—"On the other hand, we must not suffer ourselves to imagine that this mode of statement amounts to a real analysis, or to anything but a mere verbal transformation of the problem; for the expression, Laws of Nature, means nothing but the uniformities which exist among natural phenomena (or, in other words, the results of induction) when reduced to their simplest expression." Dr. Barclay is, however, quite content with a phrase, seemingly; his besetting Shibboleth—which is with him mere verbal foam, "only that and nothing more"—appears again and again with a "damnable iteration" in his somewhat diffuse and painfully unmethodical pages, until the most patient reader cannot but rebel against filling his belly with wind, which, as Swedenborg remarks, "is always a most unwelcome guest there." One thing, however, the much enduring reader may learn, and that is, that the author of 'Fallacies Connected with the Application of the Inductive Method' has no very definite notion of what induction is. In a moment of rash candour he descends from vague and empty generalities, and affirms it to be "a positive induction that the apex of the lung is the seat of the local deposit of tubercle." In the event of his not, after due deliberation and consultation with his well-wishers, buying up the book, it might not be amiss if Dr.

Barclay, before publishing that second edition which some prophetic journals have foreseen, would set himself to investigate the difference between a true induction and an empirical law, and would introduce the results of these further studies into his second edition.

His observations on the employment of statistics in medical inquiries are less open to criticism, although they might advantageously have been put in much less compass. We shall take leave to do that here, in the words of Quetelet, who passes a sharp criticism on Medical Statistics :—“ All reasonable men will, I think, agree on this point, that we must inform ourselves by observation, collect well recorded facts, render them rigorously comparable before seeking to discuss them with a view of declaring their relations and methodically proceeding to the appreciation of causes. Instead of this, what do we see? Observations incomplete, incomparable, suspected, heaped up pell-mell, presented without discernment, or arranged so as to lead to the belief of the fact which it is wished to establish; and nearly always it is neglected to inquire whether the number of observations is sufficient to inspire confidence.”

It is now tolerably evident that too much has been made of statistics by a certain school of medical inquirers who drew their frothy inspiration from France: statistics only establish *tendencies*, not laws; and they can, therefore, do no more than furnish results that may be the starting-point of further and more rigorous inquiries. What Dr. Barclay might properly have done, had he been equal to his subject, would have been to point out what method this future investigation should follow in the complex matters with which a science of life has to deal. If, as is probable, he found himself unequal to that task, he might still have simply quoted a few pages from Mr. J. S. Mill’s admirable book, and refrained, as we shall do here, from putting in other words what cannot be improved, and may very easily be made much worse, as Dr. Barclay has not failed to demonstrate. “ In the sciences which deal with phenomena in which artificial experiments are impossible (as in the case of astronomy) or in which they have a very limited range, (as in physiology, mental philosophy, and the social science), induction from direct experience is practised at a disadvantage generally equivalent to impracticability: from which it follows that the methods of those sciences, in order to accomplish anything worthy of attainment, must be to a great extent, if not principally, deductive. This is already known to be the case with the first of the sciences we have mentioned, astronomy; that it is not generally recognised as true of the others is probably one of the reasons why they are still in their infancy.” “ Anything like a scientific use of the method of experiment in these complicated cases (the effects of remedies), is out of the question;” and the vulgar notion that the only safe method is

that of Baconian induction "will one day be quoted as among the most unequivocal marks of a low state of the speculative faculties in any age in which it is accredited."

Once upon a time, as tradition delivers it, certain simple villagers in a remote district to which railways had not penetrated caught a cuckoo, which, wishing to keep it, they put in the pinfold, as it is there called, or the parish pound, as it is commonly named. The cuckoo, not caring to remain long in these quarters, soon took to its wings, and, just clearing the wall, made its escape, to the no small disappointment of the villagers. But a bright thought struck them; and they straightway set to work to raise the wall of their pinfold, so that when they again caught a cuckoo they might keep it securely. In process of time they succeeded in catching another cuckoo, which they put in the pinfold as before. But when all the village was assembled in admiration to see how safely they had got their cuckoo, and each one was congratulating his neighbour, the bird rose on its wings, and amidst the greatest excitement, just clearing the top of the wall, flew away. It is said that the villagers again raised their pinfold wall, repeating the experiment, but with a like result; and it is believed that these sapient cuckoo-catchers think to this day that if they had only continued to raise the wall they might at last have kept their cuckoo. At any rate, that village is known in the district as the one whose inhabitants "pinfolded the cuckoo." Might not those well ponder the moral of this story who in medicine are striving hard to "pinfold" the human mind by means of a petty and pernicious method of investigation which is falsely called inductive, but which is truly the impudent mask of a mental impotence? That the authority of Bacon's great name should have been successfully usurped by these chattering "apes by the Dead Sea," affrighting with their wizzened faces, blinking eyes, and self-satisfied smirks, is one of those singular, unjust freaks such as careless history perpetrates when Machiavelli is made the archpriest of rascality. Were the truth rightly known, questionless Nero would turn out to be the most maligned of men; that he set Rome on fire was, it has been surmised, an excellent measure of sanitary science by one who, being in advance of his age, was necessarily the object of every scandal, slander, and obloquy; and that some enlightened persons appreciated his virtues is proved by the fact, related by Suetonius, that many garlands of flowers were hung upon his sepulchre. O History! of what stupendous lies art thou delivered!

One feature of Dr. Barclay's book, it may be well to note here: it is, that in a prim pedagogical manner he summons different living men before his awful seat of censure, and after duly admonishing them of pestilent and unpardonable errors, uses their errors to point his moral. On the propriety of such a course we do not think it

necessary to express an opinion : that it is very natural in one who is learning a subject to overestimate what he has acquired, and to underestimate what others know, every one will readily allow. Doubtless, as he has not forborne to criticise other men and their works, Dr. Barclay will not object to what we aver to be honest, and hope to be competent, criticism of himself and his work. In a few words, then, we sum up our opinion of his book : so much quiet pretension with such a, we will not say schoolboy-like, but defective treatment of a great subject, seems to us to present a striking example, if not of a "medical error," certainly of a "fallacy" in a man's estimation of his own capacities and attainments. It is a disgrace to medical criticism that such a work should have escaped exposure.

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### PART III.—QUARTERLY REPORT ON THE PROGRESS OF PSYCHOLOGICAL MEDICINE.

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*The first part of this Quarterly Report on FOREIGN PSYCHOLOGICAL LITERATURE is omitted, owing, we regret to say, to the indisposition of Dr. Arlidge.*

*We have every reason to believe that Dr. Arlidge will be enabled to resume in our next number (July) his Report on Foreign Psychological Literature. The subject of his next Report will be Recent French Psychology.*

*The Report on ENGLISH PSYCHOLOGICAL LITERATURE is likewise omitted, owing to the continued press of other matter.*

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### PART IV.—NOTES AND NEWS.

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*Circular by the Commissioners in Lunacy.*

OFFICE OF COMMISSIONERS IN LUNACY,  
19, WHITEHALL PLACE; 9th March, 1865.

SIR,—I am directed by the Commissioners in Lunacy to request that in future, in the case of any notice of death from which it appears that no person was present at the time of death, there

should also be stated the circumstances under which the patient died unattended, and also whether any inquest was held in the case.

The Commissioners are strongly of opinion that, where a patient is seriously ill, or death is apprehended, some person should be in attendance all night.

I am, Sir, your obedient servant,

W. C. SPRING RICE, *Secretary.*

*Dr.* —

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*University of London; Examination in Mental Diseases for the Second M.B. Pass.*

At a meeting of the medical sub-committee of the Annual Committee of Convocation, session 1864-5, held on the 3rd of February, present—Dr. Storrar, in the chair; Dr. Anstie, Mr. E. Charles, LL.B., Dr. Maudsley, Dr. Randall, Mr. J. Robson, B.A., Dr. Sibson, Dr. Maudsley read the following *Report upon the subject of Mental Diseases*:—

Whilst every department of medical science has of late years received great extension, and whilst medical studies have in consequence been made wider and more complete, there is still, strange to say, no instruction whatever given at any of our London medical schools on the subject of Mental Diseases, and no adequate knowledge of them, if any, exacted by any of our examining bodies. As long ago as 1831 Dr. Conolly, who was at that time Professor of Medicine in what was then called the London University (now University College), attempted to effect arrangements for giving instruction in mental diseases, and for gaining access on the part of medical students to the wards of the London asylums; but, as Dr. Conolly observes, “in that busy period of agitation and movement more important matters occupied the attention of the distinguished founders of the University, and I could not obtain attention to this suggestion. And even now,” he continues, writing in 1862, “when thirty years more have passed away, and every department of medical study has received new and great impulses, the only branch of pathological instruction which it is not thought necessary to illustrate by examples seen in hospital practice, is still the department of Mental Pathology, including all the varied symptoms of the mutual influence of the body on the mind, and of the mind on the body, and the means of their alleviation and cure.” This entire neglect still continues, although since Dr. Conolly made his unsuccessful attempt a complete revolution in the manner of treating the insane has been effected by his distinguished exertions, and although great activity now prevails in the scientific investigation of mental

diseases, and great promise exists of important progress in a knowledge of them.

But though this is the case unfortunately in London, it is a defect in medical education and a reproach which is now almost peculiar to London. In Edinburgh a systematic course of lectures on, and clinical instruction in, Mental Diseases is given as a special course by the Professor of Medicine; and recently a chair has been specially endowed for that purpose at the College of Physicians of Edinburgh by Sir A. Morrison. In Paris, lectures and clinical instruction are regularly given by the physicians of the Bicêtre and the Salpêtrière; in Vienna certain special teachers are regularly appointed by the University; and at Berlin there is systematic instruction at the asylum in connection with the great hospital of La Charité. When the East India Company was still in existence, the medical officers who entered its service were wisely required to present certificates of having given due attention to insanity; and at that time there was some attempt made at the London asylums to furnish instruction in insanity; but since the East India Company has been defunct, medical officers are not required to know anything about insanity; and accordingly no attempts are made to enforce a study of the diseases that produce it.

It is impossible not to think that the public and the medical profession both suffer from this complete neglect of mental diseases, and that it is most desirable to take some steps to remove the existing reproach. The most obvious and advisable plan of doing so would certainly appear to be by giving to mental diseases that recognition in the examinations of the University which their importance demands. Then would the different schools at once take steps to provide the necessary instruction, and students would recognise the necessity of profiting by it. Certain of the medical schools appear now to be desirous of making some attempts to establish lectures upon the subject; but it is much to be feared that their praiseworthy efforts will not be attended with the success which they deserve unless the University of London does its part also, and duly recognises an examination in Mental Diseases as a necessary part of the medical curriculum.

If this desirable change be allowed to be needful, the way in which it might best be done would seem to be by making Mental Diseases, and the legal conditions and preliminaries necessary to the confinement of the insane, the subject of a distinct paper at the Second M.B. Pass Examination. It plainly is not a subject which might properly be relegated to the Honours Examination, but one which should rightly form a part of the Pass Examination, inasmuch as it concerns the whole medical profession that there should be a due knowledge of mental diseases amongst its members. Every medical man has in his practice to deal with insanity as with any other disease; and it

usually falls to him to deal with it at that early stage of the disease when there is always the best hope (and sometimes the only hope) of effecting a cure. Every medical man, again, is frequently called upon to sign a certificate under which an insane person is sent to an asylum and confined there; it is most desirable, therefore, that he should be fully informed, not only of the phenomena of the disease, so that his certificate may be just and valid, but of the legal bearings of the certificate, and of the legal conditions under which he gives it. Nor is it less desirable that every medical man should be acquainted with the legal enactments with regard to the treatment in a private house of an insane patient whom it is not thought necessary to send to an asylum. Lastly, every medical man may have to give evidence in a court of justice with regard to soundness or unsoundness of mind when the gravest consequences depend upon the determination of the question at issue. He is supposed, by virtue of his profession, to be capable of giving scientific evidence on such point; and yet, as things are at present, a knowledge of insanity forms no part of his professional education. It is quite possible that he may have to give evidence in the matter of the life and death of an insane prisoner, when it is the first case of insanity which he has seen in his life.

We deem it, therefore, for every reason, to be most desirable, both for the credit of the medical profession and the welfare of the community, that the University insist upon an adequate knowledge of Mental Diseases in all those whom it sends out to the world stamped with its degree as highly qualified practitioners. Effectually to do this would require not less than a distinct paper at the Second M.B. Pass Examination.

After considerable discussion, it was resolved, on the motion of Dr. Maudsley, seconded by Dr. Sibson—

*“That it is desirable that a Certificate of having attended a Course of Clinical Instruction in Mental Diseases should be required from all Candidates for the Second M.B. Pass Examination, and that the examination should necessarily embrace the subject of insanity.”*

*“That Dr. Maudsley and Dr. Sibson be requested to report this resolution to the Annual Committee.”*

(Signed)

W. SHAEN, M.A., Clerk.

### *Moral Insanity.*

THE suicide of the murderer George Victor Townley has recalled public attention, not only to the history of his crime, but to the strength or weakness of the views held by certain medical authorities on what is now called “Moral Insanity.” It is, we believe, argued that the tragic end of this criminal confirms the judgment of those

experts on whose opinions the Derby justices acted in giving a certificate of his insanity. We are told that the sequel of the case proves the thorough consistency of Townley's mental history. He committed an outrageous murder because he was devoid of all moral sense and recognised no moral responsibility. He utterly disbelieved in a future state of rewards and punishments, and he finally dealt with his own life much as he had dealt with his sweetheart's life. It was a trifle which he might retain or fling away under no sense of duty to himself, to society, or to his Maker. This, as we are told, or shall be told, is a consistent life. It is ruled by madness throughout. Beginning with murder, it logically concludes with suicide. No moral convictions, no sense of responsibility—this is madness. We certainly agree with this estimate of the case so far as to be convinced that Townley's career is thoroughly consistent with itself. We should expect that such a character would end in self-murder. A man who murders his neighbour is very likely indeed to murder himself. One Judas Iscariot ran through precisely the same moral course; and it is quite possible that, under the psychological manipulation of medical authorities, he also would have been found to be morally insane. For all practical purposes, he too committed murder—murder of the basest and most irrational kind—and ended in suicide. The conclusion, therefore, must be that M. Renan's distinguished client was, like Townley, "morally insane," and therefore irresponsible.

We have no objection theoretically to all this talk. It is a mere question of words, and saves the trouble of thought. If experts choose to say that all very great criminals and scoundrels of extravagant wickedness are *ipso facto* morally insane, because their vices and atrocious deeds exceed the ordinary dimensions of everyday sin, we have no particular objection to their saying so. All that comes of it is to deprive the word "insanity" of any real meaning. When, however, we come to a practical conclusion, we are at issue with the ingenious practitioners who hold this doctrine of moral insanity. We would hang the victim of moral insanity; they would not. We should not seriously complain if Borgia, or Catiline, or Nero—the last of whom likewise consummated every vice and crime by a blundering attempt at suicide—were called morally insane. The phrase appears to be only used as convertible with intensely wicked; and if, contrary to the custom of ordinary speech, "insane" only means very wicked, anybody may in this way misuse language as much as he pleases, for aught we care. This is the fallacy that requires to be exposed. Insanity, as hitherto used by articulately speaking men, is inconsistent with responsibility; but, in the gabble of medical science, irresponsibility is proved by the mere fact of extraordinary immorality. If this is to be so, it will certainly simplify the criminal code. It only requires a new chart and scale of wickedness. Henceforth, the greater the knave, the less his guilt. A

moderate criminal, who has only reached to the point of the moral thermometer registered temperate, is not insane, and may therefore be punished. Let his crime rise a few degrees in intensity, and he becomes irresponsible. If his moral perceptions are merely hazy and indistinct, we may fine, flog, and imprison him ; but when, by a long course of indulgence in vice, and after a sustained absence of all checks and restraints on his passions, he has contrived to obliterate all moral perceptions, and is thoroughly brutalised, he is an interesting victim of obscure mental disease, whom it would be as unjust to punish for the consequences of the state of his brain as it would be to institute a criminal prosecution against a victim of rheumatic fever. We shall, of course, be told that this way of putting it is very unscientific, and that, unless we have made psychological analysis a matter of profound study, we have no right to express ourselves in this coarse and crude manner. Casual observers are not fair or adequate judges of what does or does not constitute lunacy. It is only an expert who is possessed of the mysterious solvent by which the subtle elements of insanity disengage themselves, and are revealed to the acute professional sense. There is this amount of truth in such language, that experience does, of course, give professional men superior skill in forcing real lunatics to expose their delusions. But in cases such as that of Townley nothing of the sort occurs. The expert has no advantage over the ordinary observer. All that the most acute observer, after the most diligent probing, could extract from him was that he was totally deficient in the sense of moral responsibility ; but this fact was equally patent to the most unscientific observer. It wanted no M.D. to bring out the fact ; the only question is as to the practical value of the fact. The difference is, that the medical authorities assume that the absence of the sense of responsibility on the patient's—or, as we should say, criminal's—part towards society, implies the abeyance of responsibility on the part of society towards the criminal. It means that, when once a man says "I have no duties," therefore he has none. It means that it is enough for a scoundrel to deny that he recognises law, for law to retire from the dispute and decline the jurisdiction which is thus impudently contested. And when we are told that Townley's was an obscure case, and his disease was very subtle, and required the most refined and delicate diagnosis to detect it, the answer is that there was never anything plainer. Townley avowed throughout his moral, or immoral, code with the most patent and honest frankness :—"I am not responsible for my actions ; and, therefore, I do what I please or what I must." To say this, we are told, is insanity ; to say this, we reply, is most insolent wickedness, and if you act upon it we mean to hang you.

We do not suppose that the scientific advocates of Townley's original insanity really think their view strengthened by the pro-

ceedings at the coroner's inquest. To bring in a verdict of unsound mind in a case of suicide is a matter of course, and in this particular case the jury acted under pressure throughout. The coroner, Dr. Lankester, is obviously a disciple of the school whose views we have been combating; and this is an objection to the office being held by a professional person. Such a person has usually foregone and private views to support. The surgeon of the gaol had no reason to pronounce on Townley's insanity. One test of insanity was certainly wanting, for the size of the brain he pronounced to be normal; but he was immediately informed by the coroner that organic disease of the brain is no proof of insanity. Insane persons often have no disease of the brain, and disease of the brain is often present in sane persons. Dr. Lankester, therefore, discards all the physical and material tests of insanity; what he looks for is "seeds of insanity," invisible tokens and inscrutable vague suspicions which are incapable of proof; he detects insanity by private and mysterious tests only known to the adepts, but quite perceptible to them even in cases "in which there are no appearances of insanity." To be sure, Mr. Bradley could find none in this case, though he was naturally on the lookout for them. The chaplain, however, was more malleable. The jury had been warned by the coroner to dismiss from their minds all the history of Townley's case; but no such warning was addressed to the chaplain. He therefore at once confines himself to the previous history of the deceased, and finding nothing of madness either in the past or present, as far as it was open to him, he argues backwards from Townley's death to his life. Certainly, from all that he had observed of Townley for twelve months, he should have considered him a sane man, but the suicide leads him to a different conclusion. Townley "was perfectly insensible to the sin of the act which he committed. He could not see that it was sin. He was morally insane." And, as a further evidence of Townley's insanity, the reverend gentleman adverted to the letter written by the murderer to his mother—a letter which, to the minds of those who do not believe in "moral insanity," is only a tedious farrago of coarse, heartless, and unfeeling nonsense, and plainly betrays, what there is no question of, that the writer acknowledged no moral obligations to God or man.

And here we may take leave of Victor Townley. His whole case has seriously compromised the administration of the law. But the evil has been at least partially retrieved. The mistake under which a certificate of his insanity was originally procured cannot be repeated, for an Act of Parliament has prevented its recurrence. The criminal lunatic was, to the credit of medical science—after an investigation which reversed the opinion of the experts who prevailed at Derby—transformed into a felon; and, though Townley escaped the consequences of his crime, he died a convicted murderer. This

is something. It is not the first case in which, having been jockeyed into a miscarriage of justice, the Home Office declined to carry out the righteous decision of the law, and, by an inconsistency perhaps in some degree pardonable, refused to hang as vile a murderer as ever lived, only because the immediate execution of his sentence had been prevented by a series of successful intrigues. But Victor Townley's fate is hardly encouraging to the scientific gentlemen who preach the doctrine of moral insanity. Penal servitude for life, though alleviated by the perusal of '*Gil Blas*', '*Silvio Pellico*', and an opportunity of practising in German calligraphy, was found to be a punishment so intolerable that Townley preferred suicide to his experiences of Pentonville and his prospects of Portland. This life-history will scarcely encourage amateur atheists—even though, like Townley, they may be enabled to quote the traditionary records of family insanity in the case of their great-grandmother's aunt's second cousin twice-removed—to murder their sweethearts and themselves. Fanatics may, if they please, still continue to console themselves with the private opinion that disbelief in God and in a future state of rewards and punishments is a sufficient proof of lunacy, even though this doctrine would have consigned Auguste Comte to a hospital. And fools who are puzzled by the presence and language of an audacious criminal towering above ordinary villainy, may take refuge in the plea of moral insanity, careless or ignorant that the excuse might equally have availed for Palmer and Rush. But at present the law of England has not been changed since it was laid down in M'Naghten's case; and the opinions of fools and fanatics on the subject will not, we are persuaded, be fruitful in any practical results on the guardians and makers of the law. It has never been proved, because it never can be proved, that "moral insanity" is more than a mischievous juggle of words; and the world's common sense, and the necessities of social security, are likely to protect us against any inconvenient consequences arising from the theoretical admission of an ideal possibility. Experts are free to hold what opinions they think proper, so long as we decline to allow to the "morally insane" freedom to commit unpunished murder, rape, or robbery.—*The Saturday Review*, February 25.

*The Royal Hospital of Bethlehem and the Charity Commissioners.*

(See '*Journal of Mental Science*', January, 1865.)

The following Report has been sent to us for publication:—

*Report of the Committee of the Royal Hospitals of Bridewell and Bethlehem Hospital, submitted by F. O. Martin, Esq., Inspector of Charities, as worthy of the consideration of the Governors, and on the Observations of Drs. Hood and*

*Helps, the late and present Chief Resident Physicians of the Hospital, thereon, agreed to at the General Court of Governors, held on the 30th of January.*

These suggestions are—

1. “*That the Revenues for Incurables should be amalgamated with the General Revenues of the Hospitals.*”

The Committee admit that by such an amalgamation, which however it is believed cannot be made without the aid of Parliament, or of some equal authority, the keeping of the accounts of the hospital will be greatly facilitated, but considering that the funds of the hospitals are sufficient for both curable and incurable cases, and having regard to the very strong terms in which the large revenue of the hospital obtained under the will of Edward Barkham is restricted to the use of incurable patients, and the general desirability of adhering to trusts which can yet be beneficially fulfilled, the Committee are not prepared to recommend that any change be made in this respect.

- 2nd. “*That a Branch Establishment be provided in the country for the temporary reception of such of the patients as the Resident Physician of the Hospital may consider likely to be benefited by the change.*”

The Committee fully concurring with Drs. Hood and Helps in their observations on this subject, recommend the General Court—

1st. To decide on the erection of a branch establishment sufficient for twenty patients, and capable of extension for the accommodation of a larger number if found desirable.

2nd. To authorise the Committee to select, subject to the approval of the Court, such a site as they consider suitable for the purpose.

- 3rd. “*That the Rules of the Hospital be so altered as to allow the admission of patients suffering under a greater variety of forms of insanity.*”

The Committee again fully concurring with Drs. Hood and Helps recommend that the rules they suggest respecting the admission of patients be approved and adopted in the place of the existing rules, as an experiment; and that Dr. Helps be requested to report at the close of the year 1865 on the result of the change, with a view to the consideration of the question whether further alterations may not then be advantageously made.

- 4th. “*That with the view of extending the experience requisite for the efficient Medical Treatment and Management of the Insane, a limited number of young medical men who have recently completed their other medical studies, and have obtained their several diplomas, be received into Bethlehem Hospital under such regulations as to residence, duties, and allowances, as shall be adopted for the purpose.*”

The Committee have to report on this subject that two bed-rooms and one sitting-room in the hospital, which are deemed sufficient for two students of this class, can be prepared and appropriated to their use.

They therefore recommend—

1st. That Bethlehem Hospital be open for the gratuitous admission of two resident medical students.

2nd. That they be young medical men who have recently completed their other medical studies, and have obtained the requisite diploma to practise medicine and surgery.

3rd. That as a rule the residence of each in the hospital be limited to six months.

4th. That they be not entitled to any salary, but that in addition to furnished apartments, they be allowed such rations, fuel, light, and attendance as the Committee shall from time to time consider reasonable and sufficient.

5th. That in other respects they be subject to such regulations as the Committee, under the advice of the resident physician, shall from time to time approve.

6th. That they be elected by the Committee from candidates soliciting the privilege, satisfactory testimonials being an indispensable qualification—and,

7th. That the Committee have authority to terminate the residence of a student at any time for neglect of duty or other irregularity.

In the event of these recommendations being adopted, the Committee further recommend that they be directed to publish the same, and to elect two medical students, if practicable, as soon as the apartments for their residence and the regulations for their maintenance and duties are prepared and approved.

*Professor Robert Lee, D.D., on the Relations between Mind and Body.*

Instead of the body being a filthy garment, with which the soul in its wanderings through eternity has become accidentally invested for a short while, and which never can be justified or rendered a congenial or suitable covering for the spirit that is wrapped in it, but which that spirit should only loathe, separate itself from and escape out of as quickly as it can, we are taught by those who have most deeply studied the subject that the body is a constituent part of human nature itself, so that the soul without the body is no more entitled to be regarded as *man* than is the body without the soul—that between these two exists a communion so intimate, however inexplicable, that all our feelings, emotions, thoughts, reasonings,

memories, imaginations, and, in short, all mental acts or states whatever take place through the intervention and instrumentality of the nervous system, the great centre of which is the brain ; and that we have no proof that *in our present state* any mental act whatever can be performed except through that instrumentality. Thus, mental derangement, imbecility, loss or failure of memory, and similar phenomena, in all their melancholy variety, are so many indications and effects of an impaired or a diseased condition of the nervous system. That the young apprehend and learn more quickly than the old results from the different conditions of the brain in the two periods ; and a thousand familiar appearances are explained in the same manner.

Insanity is now regarded by physicians, that is, by men who are acquainted with the subject, as a *bodily disease* as much as fever, rheumatism, or consumption, and it is treated accordingly. I do not go about to prove these things, because this is not the proper place, and because they are too familiarly known to need proof. I state them only as truths regarding the constitution of our nature, which scientific investigators have revealed and demonstrated, and the general result of which is to expose those heathen notions which I formerly mentioned as equally false and profane.

From the researches of men who study facts by the light of reason, let us turn to the testimony of those who spoke as they were moved by the Holy Ghost, and we shall find "the sure word of prophecy" confirming most emphatically what the former have declared. The Holy Scriptures, then, inform us that man's body, no less than his soul, is the work of God, and that He made both of them "very good ;" that both are alike fallen and polluted by sin, both alike redeemed by the blood of Christ, both alike objects of sanctification by the Holy Spirit ; and that the body is co-heir, with the soul, of that immortal life which is God's promise to us in His Son. No contrast can be more striking than between the language of contempt and even of hatred, in which the heathen sages speak of the body and the reverential and honorable terms used by the sacred writers on the same subject.—*The Duty of caring for the Body, a sermon preached before the Queen, in the parish church of Crathie.*

#### *The Berlin Asylum.*

The capital of Prussia has hitherto been remarkable for its neglect of its insane inhabitants and its backwardness in adopting those ameliorations of their condition found in the Asylums of wellnigh every other city of Europe. It is therefore with much pleasure that we read of a movement to provide a fitting special institution for 600 chronic lunatics, having one also for idiots in connection with it. These chronic lunatics and the idiots have been hitherto confined in

a most unfit building in the centre of Berlin, known as the "Arbeitshaus," or Workhouse. The condition of those suffering from recent insanity is not better, for these are congregated in the wards of one section of the General Hospital of La Charité, having besides the patients afflicted with syphilis placed in other wards of the same section of this city institution. It is to be hoped now that the chronic cases are in the way of getting proper attention, that the acute cases will also have their claim to humane and proper treatment efficiently attended to.

*Dr. Paget on the Study of Natural Science as a branch of higher education.*

"The general question, whether the study of natural science should become an established part of the education of the higher classes, is a subject of such interest as to need no apology for its introduction before any audience, and least of all before you. It is not only one of the great educational questions of the day, but a question, in the right solution of which no class is more interested than is our profession. I confess that, to me, it seems high time to consider whether natural science might not be useful as part of a liberal education, when an author of great distinction and undoubted learning—one whose writings have been rewarded with the applause of the educated world and with some of the highest dignities in the gift of the Crown—states as a "well-attested fact, that a man's body is lighter when he is awake than sleeping; a fact" (he says) "which every nurse who has carried a child would be able to attest;" and concludes from these *well-attested facts* that "the human consciousness, as an inner centre, works as an opposing force to the attraction of the earth." I quote from a *seventh edition, revised*. To my mind, the *necessity* for more general instruction in natural science needs no further proof, when ladies and gentlemen appear in a court of law to vouch their belief in the supernatural powers of a crystal globe; when those who are called highly educated throng the necromancer's consulting room to hear disembodied spirits rap on his table; when they daily become the dupes of barefaced quackeries; and, while avowing their belief in what is absurd or even impossible, plume themselves on their superiority to prejudice, regard themselves with complacency as walking in the spirit of the age—as being *au courant* with its progress—and class with the persecutors of Galileo any who question the accuracy of their facts or the logic of their conclusions. Whatever may be thought of the enlightenment of the present age, there can be no doubt of the readiness and boldness with which it forms or avows its opinions. Far be it from me to question the birthright of an

Englishman to judge of all matters, whether he understands them or not. The right of private judgment is the most precious of civil rights ; but it *may* occasionally make fools of us, when exercised upon questions in which we are uninstructed. Even freedom of thought is not an unmixed good. It stirs a community in *all* directions—not always in the direction of progress. In the unwise and presumptuous it is often the parent of mischievous errors, that find ready acceptance among the ignorant and indolent, and cost for their removal much time and trouble of wiser men. It is easier to refute errors than to remove them. Ignorance must be instructed, self-sufficiency must become modest before it can be convinced.

"I have sometimes fancied that the rapid succession of brilliant discoveries and inventions which has characterised the present age, and should have enlightened it, has actually enhanced its credulity for the pretensions of quackery and imposture ; that the unexpected and unimagined achievements of true science have so dazzled the minds of people as to render them more accessible to other marvels, whether true or false, and more ready to yield unquestioning belief in *whatever* is new and wonderful : as, in times of old, the heroic deeds of a Hercules or King Arthur led their admiring countrymen to ascribe to them other achievements, not only unreal, but impossible.

"Or as, in the sixteenth century, when men's minds had been roused and agitated by the spiritual preaching of the Protestant Reformers, a readier credence was given, not to spiritual *truths* only, but also to spiritual and mystical *errors*. Then was the time when enthusiasts abounded, whose imagination called up before their eyes every object they desired to see ; then it was that astrology was the most widely spread and most generally studied as a useful science ; then it was that demons were classified, and that witches were burnt in thousands. Then, even self-reliant intellects that had thrown off the yoke of ancient beliefs, yielded a ready credence to almost anything which had a spiritual semblance. Melancthon was one of the chief defenders of astrology. Luther attributed diseases to the immediate agency of the devil, and was indignant with the physicians who referred them to natural causes. Paracelsus and Cardan, while shaking the popular faith in ancient physic, rested their own on cabalism and astrology. In the old city of Aberdeen sorcery had lain undiscovered, though the holy clerks of King's College had been there for a hundred years, ready at any time to have exorcised it with bell, book, and candle ; but in the fourth year after the founding of Marischal College and the spiritual teaching of its Protestant professors, twenty-four witches were burnt alive for dancing with the devil around the market cross.

"As the minds of men in those days, when awakened to new and deep spiritual convictions, were opened also to mystical *errors* ;

—so in the present day, when startled with scientific wonders beyond their comprehension, do they gape at and swallow indiscriminately everything new that is presented to them under the outward guise of science :—and this, while they are disposed rather to scepticism than credulity in matters of ancient belief. Truth, it has often been said, is stranger than fiction. They that use the proverb have, commonly, in view only the events of history or of social life. But it is equally true, if we compare the established facts of science with the pretended facts of fraud or quackery. If you tell an uninstructed person that you can talk easily and fluently with a friend a thousand miles off, can write to him at that distance in letter or in cypher, whichever he prefers, and that all the help you need is in some pieces of zinc and copper and some acid and a long piece of wire, and a thing somewhat like the face and hands of a clock : and then tell him, that by merely resting your fingers on a table, you can make it turn round and stand on one leg, and then move of itself about the room : both things may seem to him very strange, very wonder-moving ; but surely the truth here must seem stranger than the fiction : to an uninstructed person table-turning must seem at least as credible as electric telegraphy. Or, again, if you were to tell him that there are rays of light which give no light, that, when separated from other rays and admitted into a darkened room, they cannot be seen, they give no light, and the room remains dark as before ; and yet that Professor Stokes has made them visible, has made these dark rays shine and give light in the room, merely by intercepting them with a solution of a salt of quinine contained in an ordinary glass :—and if, then, an advocate of homeœopathy were to expound to the same hearer his views of the action of medicines :—surely the dogmas of Hahnemann (unproved and unsound as we know them to be) may seem to the uninstructed person no more strange or incredible than what you had told him about the rays of light, though the latter be well-assured facts, that can be verified at any moment, and are in harmony with the whole body of optical science.

“ It is plain that by no instinct, no common sense, no natural power, can any man discern between truth and untruth in these matters : to the uninstructed in sciences of observation the truth must seem stranger, less credible than the fiction. It is to this want of special scientific instruction that we must ascribe the popularity of error. For it must be admitted, that they who believe the fictions are not all, in a general sense, fools : there are among them prudent statesmen, astute lawyers, faithful ministers, discreet housewives, such as in their several callings we might be content to take as our guides. And yet, because of their want of scientific training, their want of that knowledge which would tell them what it takes to establish a real fact in science, they are unable to distinguish truth from its counterfeit, or to gainsay the pretensions

of quackery and imposture. How, then, can people be guided to a better judgment in these things? Chiefly by being themselves in some measure instructed in some of the sciences of observation; and then by being taught that, in such things as I have put in contrast, the one set of statements are, and the other are not, founded on careful, repeated, various inquiries by men of special training; that the one set are, and the other set are not, provable by every test to the satisfaction of all who will look on and who are too acute to be deceived; and, finally, that the truths are, and the fictions are not, parts of a system or whole body of sciences. It is this—the value and weight of a body of science—that uneducated people cannot understand. They may perhaps form some judgment whether the reasons advanced for any new view be in themselves good or bad, but they cannot estimate the kind or amount of evidence necessary to establish its truth; nor can they appreciate the objections to it. They know not the multitude of well-assured facts which make up the body of true science, and each of which must be a standing argument against the admission of any new view that is at variance with them. To persons versed in science, this objection in its aggregate is well nigh conclusive. We may, in short, safely assert, that whatever cannot bear the test of other scientific inquiry, whatever cannot be incorporated with other knowledge, is probably not true.

"These, unfortunately, are tests which they who are uninstructed in science cannot apply for themselves; and, as this class must always remain a large one, we may be sure that quackery and credulity, fraud and folly, will never cease while the world lasts. They are evils that can never be wholly removed. Yet, assuredly, they may be mitigated. If some portion of the natural sciences, and in particular those which treat of the laws of life, should become an established part of the higher general education—of the education, not of medical students only, but of every English gentleman, we may expect that society will, in course of time, become more conversant with the kind of knowledge required for distinguishing between true science and its counterfeit. We may reasonably look forward to this improvement, if the universities of Oxford and Cambridge go onwards in the course they have taken of late years, and do not rest until no one shall be called well educated who has not been trained in the knowledge of some natural science. I say expressly *some* natural science; for he that has studied even one, and has learned with what temper it must be pursued, with what labour it has been set up, with what evidence every new doctrine in it must be supported, and how that evidence must be able to bear a jealous cross-examination,—he, I say, that has learned this in any one natural science, will not lightly adopt spurious imitations of facts in any other."—*'The President's Address, at the Thirty-second Annual*

*Meeting of the British Medical Association, held in Cambridge, August, 1864.*—By GEORGE E. PAGET, M.D., F.R.C.P., Member of General Medical Council; Member of Council of Senate, University, Cambridge.

### *The Plea of Insanity.*

The Capital Punishment Commissioners met on Friday and Saturday, the 10th and 11th instant, at No. 2, Victoria Street, Westminster, when Dr. Hood, one of the Lord Chancellor's Visitors in Lunacy, and Dr. Harrington Tuke were examined before the Committee in especial reference to the plea of insanity in criminal cases.  
—*The Lancet*, March 18th.

### *The Asylum Case Book.*

Of the duties of the medical officer in an asylum, that of keeping the Case Book is not the least important, nor one whose performance affords him much satisfaction. A book containing within the compass of a single volume, or of one for each sex, complete records of all the cases actually under treatment, is probably a desideratum in most asylums. The prevailing plan of filling up successive books with more or less fragmentary accounts has many and constantly increasing inconveniences, and if a patient live many years in an asylum, the history of his case may ultimately have to be sought in detached notes, scattered through ten or twenty books. A striking illustration of this recently occurred in one large asylum where, on the occasion of an official visit, a view of the Case Book being requested, a small cartload of bulky volumes was placed before the dismayed visitors.

In addition to the inconvenience arising from the history of a single case being recorded in numerous detached notes in an indefinite number of books there is a more serious disadvantage in the loss of time incurred in turning over an immense number of unrequired leaves, in the periodical operation of posting from the daily note books and reports. Indeed, keeping the case book in the prevailing manner is an interminable and troublesome duty, hardly admitting of being performed in a manner to be of use for the purposes of study, even if the difficulties of reference be submitted to.

In one large asylum loose sheets are kept in each ward, the entries being made daily at the conclusion of the medical visit, and when the completed cases have accumulated in sufficient number, they are bound together in the form of an ordinary volume. This plan is obviously defective.

In an asylum case-book several conditions may advantageously be observed; in the first place, it should be a *book*, that is to say, the leaves ought to be held firmly together. The Act of Parliament is clear upon this point. Hence the Commissioners do not approve the plan of loose sheets. Secondly, it should be so arranged that any required case may be readily found entire, or written on *consecutive* leaves. Thirdly, instead of keeping in the same book the cases of the dead, the discharged, and of those under treatment, a special volume should be allotted to each of these classes.

Further, it should exhibit in a succinct form, under distinct heads, the leading facts of age, number of previous attacks, duration of the existing condition, date of admission, occupation, religion, natural character, previous habits of life, the causes of the attack, hereditary, moral, and physical; next, more in detail, the information derived from the medical certificate and from statements made by friends and others.

Then should follow a description of the patient's physical condition, all marks, bruises, cicatrices, fractures, or other injuries being particularised. This information being taken down on the admission of each patient, and in presence of the accompanying friends, the task is not found irksome, nor does it interfere with other duties.

The entry of the *form* of mental disorder may be deferred a few days, to afford opportunity for diagnosis, &c.

Important details of treatment and the subsequent history of the patient can be recorded as occasion may require, but in the majority of chronic cases an entry every quarter will suffice.

When the case is completed, either by the discharge or the death of the patient, the sheets containing it should be *transferred to another volume*, by which means the current case-book is kept of convenient size.

These conditions are observed in the plan adopted at the Lincolnshire County Asylum, and, in practice, it is found to leave little to be desired. In this institution six separate books are kept, one being devoted exclusively to actual patients, one to the discharged, and another to the cases of those dead, of each sex. These books will suffice for an indefinite period. The transfer of cases from one volume to another is made quarterly, and is easily effected; when done, a little simple mechanism by which the leaves are bound together is readjusted, and the volumes become as firm and compact as ordinary books, from which, moreover, they are scarcely distinguishable in external appearance.

The contrivance by which these advantages are gained may be briefly described as a movable book-cover or portfolio, containing leaves which are secured to it by means of two female screws with flat heads, the latter being covered with material of the same colour as the cover. To remove a leaf from any part of the book, it is

necessary to raise the two male screws on the proximal side of the leaf, and to slide the intervening leaves on to them, thus exposing the one required, which can be transferred to another volume by a similar proceeding. Further security may be obtained by having an ordinary clasp in front. This arrangement is found to convert a very tedious and distasteful task into an interesting and profitable study, and which occupies only a sixth part of the time sacrificed to the duty under the old method.

T. B. B.

*Letter from Baron Mundy, M.D., of Moravia.*

PARIS; January 1st, 1865.

SIR,—Since my resolution, proposed at the last General Annual Meeting of the Association (14th July, 1864), was accepted, all I have heard from friends, and experienced by facts, induced me to believe that, under the actual circumstances, it would be impossible to carry out my motion practically and with a useful result.

I therefore give you duly notice that, for my part, I withdraw my motion, hoping that in a future and more proper time a better man than I, and perhaps an Englishman, will carry out what I honestly endeavoured.

The members of the committee will kindly excuse the lateness of this notice, caused by a prolonged scientific journey on the Continent.

I feel obliged to renew my thanks to all the members who took interest in my motion, and, in particular, to Dr. Robertson, who seconded it, as well as to all the proposed members of the Committee.

I remain, Sir,  
Yours faithfully,  
J. MUNDY, M.D., *of Moravia.*

Dr. HARRINGTON TUKE,

*Hon. Sec. to the Association of Medical Officers of  
Asylums and Hospitals for the Insane.*

*Publications Received.*

‘Clinical Observations on Functional Nervous Disorders.’ By C. Handfield Jones, M.B. Cantab., F.R.S., Physician to St. Mary’s Hospital. John Churchill and Sons, New Burlington Street, pp. 385. *See Part II, ‘Reviews.’*

‘Pathological and Practical Researches on the various forms of Paralysis.’ By Edward Meryon, M.D., F.R.C.P., late Lecturer on Comparative Anatomy

at St. Thomas's Hospital, pp. 215. John Churchill and Sons, New Burlington Street. *See Part II, 'Reviews.'*

'Medical Errors. Fallacies connected with the Application of the Inductive Method of Reasoning to the Science of Medicine.' By A. W. Barclay, M.D. Cantab. and Edin., Physician to St. George's Hospital. John Churchill and Sons, 1865. *See Part II, 'Reviews.'*

'Sur les Divers Modes de l'Assistance Publique appliquée aux Aliénés. Discours prononcé dans les séances de la Société Médico-Psychologique à Paris, le 26 Décembre, 1864, et le 16 Janvier, 1865.' Par le Docteur J. Mundy, de Moravie, Membre Etranger de Ladite Société et de celle des Aliénistes de Grande-Bretagne et d'Irlande, pp. 60. Paris, 1865. *See Part I, Original Articles,' "On the means of Extending the Public Asylum System : a Sequel."*

'The Legal Doctrine of Responsibility in relation to Insanity.' (A Paper read at the annual meeting of the National Association for the Promotion of Social Science, held at York, September, 1864.)

'Climacteric Insanity.' By Francis Skae, M.D., L.R.C.S.E., formerly one of the Assistant-Physicians to the Royal Edinburgh Asylum. (Read before the Medico-Chirurgical Society of Edinburgh, January 18th, 1865).

'A General Review of the subject of Capital Punishment.' By William Tallack, Secretary to the Society for the Abolition of Capital Punishment (pamphlet).

'Speculative Philosophy.' An introductory Lecture delivered at the opening of the Class of Logic and Rhetoric in the University of Glasgow, November 1, 1864. By John Veitch, M.A. Blackwoods, Edinburgh, 1864.

'The Insanity of George Victor Townley.' By C. Black, M.D. Lond., &c., &c. London: F. Pitman, 20, Paternoster Row, 1865, pp. 34 (pamphlet).

'Du Suicide, et de la Folie Suicide.' Par A. Brierre de Boismont. Deuxième édition, revue et augmentée. Paris, 1865, pp. 763. (*Will be fully reviewed in our July number.*)

'For and against Tobacco.' By Benjamin Ward Richardson, M.D., &c. &c. John Churchill and Sons, 1865, pp. 75. *A most able essay.*

'Ideas, Opinions, and Facts.' No. I, "Clerical Celibacy;" No II, "Convents and Lunatic Asylums." Robert Hardwicke, 192, Piccadilly, 1865. (*Two of a promised series of religious controversial tracts. Their literary merits are small.*)

'The Spirit of Nursing : an Essay.' By Harry Jones, M.A., Incumbent of St. Luke's, Berwick Street, Soho. Robert Hardwicke, 192, Piccadilly (pamphlet). *A reprint from the author's 'Holiday Papers.'* *An interesting and suggestive essay.*

'Mary Ryan.' Return to an Address of the Honorable the House of Commons, dated 23rd February, 1865, for "Copy of Official Correspondence with Her Majesty's Government relative to the abduction of a nun named Mary Ryan." *See 'Journal of Mental Science,' January, 1865; "English Patients in Foreign Asylums : a Sequel."*

'The Personal Responsibility of the Insane.' By James F. Duncan, M.D., T.C.D., &c., &c. Dublin, 1865, pp. 98.

'On Primary Cancer of the Brain: an Inquiry into its Pathology, with Statistics as to its Frequency, and Illustrative Cases. By G. Mackenzie Bacon, M.D., Assistant-Physician, Cambridge County Asylum. John Churchill and Sons, New Burlington Street (pamphlet).

### *Appointments.*

G. Fielding Blandford, M.B. Oxon., M.R.C.P., has been appointed Lecturer on Lunacy at St. George's Hospital.

F. Sutton, M.R.C.S.E., has been appointed Assistant Medical Officer to the Norfolk County Asylum.

J. A. Eames, M.D., to be Resident Physician to the Letterkenny Lunatic Asylum.

James Davidson, M.B. Aberdeen, to be Resident Medical Officer of the Banffshire District Asylum.

J. B. Tuke, M.D. Edin., Assistant-Physician to the Royal Edinburgh Asylum, has been appointed Medical Superintendent of the Fife and Kinross District Asylum.

### *Obituary.*

At 81, Curzon Street, on the 10th of March, Thomas Turner, Esq., M.D. Cantab., F.R.C.P., late Commissioner in Lunacy, and formerly Treasurer of the College, and Physician to St. Thomas's Hospital.

In the '*Journal of Mental Science*,' for January, 1856, our late Editor paid the following tribute to Dr. Turner's merits, and which, now that he has gone to his eternal rest, we gladly endorse. "Dr. Turner" (wrote Dr. Bucknill) "retires from the Commission full of years and honours; and all who have the pleasure of knowing this thoroughly kind-hearted and accomplished physician will unite in heartily wishing him the enjoyment of many years of health and well-earned repose. Dr. Turner's visits of inspection to asylums were always agreeable incidents to superintendents, and were often instructive. His demeanour on such occasions was gentlemanly and considerate. He was influenced by no narrow or one-sided views of his duty, and he was ever prepared, not only to defend the interests and to promote the well-being of the patients, but also to acknowledge the just claims and to appreciate the difficulties of those who had charge of them."

The ANNUAL MEETING of the Association of Medical Officers of Asylums and Hospitals for the Insane will be held in London, probably on the first Thursday in July, under the Presidency of William Wood, M.D. F.R.C.P.,

Visiting Physician to St. Luke's Hospital. Communications and notices of motion, &c., to be sent to the Honorary Secretary (Dr. Harrington Tuke), 37, Albemarle Street.

### *Notice to Correspondents.*

English books for review, pamphlets, exchange journals, &c., to be sent either by book-post to Dr. Robertson, Hayward's Heath, Sussex; or to the care of the publishers of the Journal, Messrs. Churchill and Sons, New Burlington Street. French, German, and American publications may be forwarded to Dr. Robertson, by foreign book-post, or to Messrs. Williams and Norgate, Henrietta Street, Covent Garden, to the care of their German, French, and American agents, Mr. Hartmann, Leipzig; M. Borrari, 9, Rue de St. Pères, Paris; Messrs. Westermann and Co., Broadway, New York.

The copies of *The Journal of Mental Science* are regularly sent by Book-post to our Foreign Correspondents and Honorary Members, and we shall be glad to be informed of any irregularity in their receipt.

The following *EXCHANGE JOURNALS* have been regularly received since our last publication:

The *Annales Medico-Psychologiques*, November, 1864, January, 1865.

The *Zeitschrift für Psychiatrie*, vol. xxi, Part 4.

The *Correspondenz Blatt*, January and February, 1865, Nos. 1, 2, 3, 4.

*Archiv für Psychiatrie*, 1864, 1 semester.

The *Irren Freund*, 1 and 2, 1865.

*Journal de Médecine Mentale*, January and February, 1865.

*Archivio Italiano per le Malattie Nervose e per le Alienazioni Mentali*, Part 5, December, 1864.

*Medizinische Ahrenlese*, January, 1865.

*Medizinische Jahrbücher; Zeitschrift der K. K. Gesellschaft der Aerzte in Wien*, 1864, Part 6.

The *Edinburgh Medical Journal* (monthly).

The *British and Foreign Medico-Chirurgical Review*, October, 1864, and January, 1865.

The *Dublin Quarterly Journal*, February, 1865.

The *Medical Mirror* (monthly).

The *Journal of Science*, No. V, January, 1865.

The *Ophthalmic Review: a Quarterly Journal of Ophthalmic Surgery and Science*, No. IV. January, 1865.

The *British Medical Journal*, the *Medical Circular*, and the *Journal of the Society of Arts* (weekly).

Dr. Beale's *Archives of Medicine* have not been received.

*Dr. Droste, Osnabrück.*—We have to apologise for the irregularity in the transmission of our exchange copy. The January number has been sent by *Book-post* direct from Hayward's Heath.

*Dr. Erlenmeyer, Bendorf.*—We regret the continued mistakes in the prepayment, by the printers, of the exchange copies of the '*Journal of Mental Science*', as sent to Dr. Erlenmeyer, and also to Dr. Brosius.

*United States of America.*—The '*American Journal of Insanity*' for January has not been received (March 25). We are frequently compelled to refuse *American Asylum Reports*, on which an extra postage of 6d. is demanded. Messrs. Westermann, Broadway, New York, will forward any parcels for the '*Journal of Mental Science*' addressed to the care of Messrs. Williams and Norgate, London.

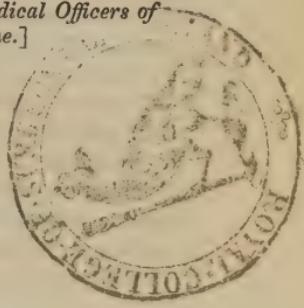
*Dr. H. Laehr, Schweizerhof, Berlin.*—We are much indebted for your kind offer, but we shall not on this occasion avail ourselves of it, looking to the information contained in your last letter.

*Macmillan's Magazine*, February, 1865; the *Scotsman*, March 2, 9, 11; the *Saturday Review*, February 25; the *Examiner*, February 18; the *London Mirror*, February 18; the *Morningside Mirror*, monthly; the *York Star* for January; the *Northampton Herald*, March 18; the *Morningside Mirror*, regularly.

## THE JOURNAL OF MENTAL SCIENCE, JULY, 1865.

[Published by authority of the Association of Medical Officers of Asylums and Hospitals for the Insane.]

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*No. 55 (new series No. 19) will be published on the  
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# THE JOURNAL OF MENTAL SCIENCE.

No. 54.

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VOL. XI.

## PART I.—ORIGINAL ARTICLES.

*Statistics of Insanity of the Crichton Royal Institution, Dumfries.*

By HUGH G. STEWART, M.D. Edin., Assistant Medical Officer  
of the Asylum.

As mental disease is generally of longer duration than other diseases, especially as seen in asylums for the insane—as it may be of life-long duration, and may frequently recur, or threaten to recur, in a single individual—to obtain a perfect knowledge of insanity, its history should extend from the earliest symptoms, and its subject be traced throughout life. Hence statistics which are made from records extending over a greater number of years are much more valuable than those which embody the results of a shorter period. A perfect series of statistical tables would require to exhibit, as far as they can, the complete history of every case, from the commencement of the mental disease until the death of the individual. This, however, is almost impossible. Dr. Thurnam,\* under peculiar circumstances, has been able to give a series of statistics which trace the history of individuals beyond the asylum walls; but in ordinary cases such completeness is not obtainable, and we must content ourselves with less perfect results. Generally the history of the patient ceases when he leaves the asylum, and any facts we may obtain in his subsequent career are so few, and possibly inaccurate, that they cannot be embodied as trustworthy statistics. The history of those dying in the asylum, and of those under observation for five years or more, is more complete; but such cases are only those in whom treatment has been unsuccessful. In the cases of readmission, however, we have generally more trustworthy data, and are thus enabled to trace many subjects of mental disease throughout life.

The following statistics have been elaborated from the reports entered in the case-books of the institution, by Dr. Browne, from 1839 to 1857; by Dr. Dickson, from 1857 to 1859; and by my-

\* ‘Observations and Essays on the Statistics of Insanity.’

self, up to the present time. The results in the first series of tables are as they stood at the end of 1863, extending thus over a period of twenty-four years, which, reckoning from the period of life at which men are most frequently attacked by insanity, may be said to embrace the remainder of a life of average duration. The history of nearly all the cases admitted in that period into the Crichton Institution has been embodied in the statistics; a few only in which the report was deficient have been omitted. In those cases even, that were fully reported some of the facts required for the individual tables were wanting, and had accordingly to be entered as unknown; on the whole, however, the information was very complete.

Great care was taken in the preparation of the tables, and the author believes them to be correct and trustworthy. The following subjects will be considered in their order, and the influence of treatment on the results in each will be exhibited.

- I. *Sex.*
- II. *Domestic condition.*
- III. *Education.*
- IV. *Occupation.*
- V. *Causes of mental disease.*
- VI. *Age on first attack.*
- VII. *Number of attacks.*
- VIII. *Duration of attacks.*
- IX. *Bodily health at the time of admission.*
- X. *Age on admission.*
- XI. *Form of mental disease.*
- XII. *Duration of the attacks.*
- XIII. *Duration of residence.*

### I. SEX.

*TABLE showing the number of cases, male and female, admitted from 1839 to 1863 inclusive, and their terminations. Also the percentages of males and females in the total number of admissions of both sexes, and the per-centages of recovered, relieved, not improved, died, and remaining in the admissions, the sexes being distinguished.*

|                                    | ADMISSIONS. |       |      | TERMINATIONS. |      |      |           |      |      |               |       |      |       |      |      |            |    |    |
|------------------------------------|-------------|-------|------|---------------|------|------|-----------|------|------|---------------|-------|------|-------|------|------|------------|----|----|
|                                    | Totals.     |       |      | Recovered.    |      |      | Relieved. |      |      | Not Improved. |       |      | Died. |      |      | Remaining. |    |    |
|                                    | M.          | F.    | T.   | M.            | F.   | T.   | M.        | F.   | T.   | M.            | F.    | T.   | M.    | F.   | T.   | M.         | F. | T. |
| From 1839<br>to 1863 } 521 380 901 | 169         | 142   | 311  | 74            | 51   | 125  | 70        | 45   | 115  | 121           | 90    | 211  | 87    | 52   | 139  |            |    |    |
| Per-centages 58·0 42·0 100         | 3·24        | 3·737 | 3·45 | 14·2          | 13·4 | 13·8 | 13·4      | 11·8 | 12·7 | 23·2          | 23·68 | 23·4 | 16·7  | 13·6 | 15·4 |            |    |    |

It will be seen that the male admissions exceed the female by sixteen per cent., and that the female recoveries exceed the male by five per cent.; while the per-cent-age of death, calculated on the admissions, is nearly equal. These results are similar to those obtained by Drs. Thurnam,\* Hood,† and Boyd,‡ with regard to the proportion of recoveries, but not in respect to the mortality, which in their observations averages four and a half less among the females than the males.

In all the following tables the sex is distinguished, so that the operations of the various conditions or causes of mental disease, as modified by sex, may be readily observed.

## II. DOMESTIC CONDITION.

TABLE showing the number of married, single, and widowed, and the results of treatment in each of those classes; and the same in the cases of married, with offspring and without offspring.

|                                   | Totals. |     |     | Recovered. |    |     | Relieved. |    |    | Not Improved. |    |    | Died. |    |     | Remaining. |    |     |
|-----------------------------------|---------|-----|-----|------------|----|-----|-----------|----|----|---------------|----|----|-------|----|-----|------------|----|-----|
|                                   | M.      | F.  | T.  | M.         | F. | T.  | M.        | F. | T. | M.            | F. | T. | M.    | F. | T.  | M.         | F. | T.  |
| Married . . .                     | 150     | 118 | 268 | 65         | 47 | 112 | 24        | 17 | 41 | 16            | 20 | 36 | 38    | 17 | 55  | 7          | 17 | 24  |
| Single . . .                      | 353     | 225 | 578 | 101        | 79 | 180 | 48        | 33 | 81 | 50            | 23 | 73 | 77    | 59 | 136 | 77         | 31 | 108 |
| Widowed . . .                     | 11      | 36  | 47  | 1          | 15 | 16  | 2         | 1  | 3  | 2             | 2  | 4  | 3     | 14 | 17  | 3          | 4  | 7   |
| Unknown . . .                     | 7       | 1   | 8   | 2          | 1  | 3   | —         | —  | —  | 2             | —  | 2  | 3     | —  | 3   | —          | —  | —   |
| Married, with off-spring . . .    | 72      | 69  | 141 | 40         | 30 | 70  | 11        | 9  | 20 | 5             | 12 | 17 | 13    | 11 | 24  | 3          | 7  | 10  |
| Married, without off-spring . . . | 4       | 10  | 14  | —          | 5  | —   | —         | —  | —  | 1             | 2  | 3  | 2     | 2  | 4   | 1          | 1  | 2   |

TABLE of the per-centages on the admissions of the recovered and died, distinguished as to domestic condition and sex, &c.

| Married.   |      |       |      | Single.    |      |       |      | Widowed.   |       |       |      |
|------------|------|-------|------|------------|------|-------|------|------------|-------|-------|------|
| Recovered. |      | Died. |      | Recovered. |      | Died. |      | Recovered. |       | Died. |      |
| M.         | F.   | M.    | F.   | M.         | F.   | M.    | F.   | M.         | F.    | M.    | F.   |
| 43·3       | 40·7 | 25·3  | 14·4 | 28·69      | 35·1 | 21·8  | 26·2 | 9·0        | 41·66 | 28·0  | 38·8 |
| Tot. 42·4  |      | 18·35 |      | 31·89      |      | 24·0  |      | 25·33      |       | 33·4  |      |

\* Thurnam, op. cit., p. 65.

† Hood, 'Statistics of Insanity,' p. 26.

‡ Boyd, Statistics in 'Journal of Mental Science,' January, 1865.

| Married, with Offspring. |  |       | Married, without Offspring. |      |       |
|--------------------------|--|-------|-----------------------------|------|-------|
| Recovered.               |  | Died. | Recovered.                  |      | Died. |
| 49·0                     |  | 17·0  |                             | 35·0 | 29·9  |

It will be seen that the most favorable condition as to recovery is the married; and in the widowed, as compared with the single, though the chances of recovery are greater, the chances of death are also greater.

The results as to recovery and death in those having offspring, as compared with those having none, is interesting; but the observations are, perhaps, too few to warrant our laying much stress on the result.

### III. EDUCATION.

TABLE showing the results of treatment in the cases having different degrees of education.

|                   | Totals. |     |     | Recovered |    |    | Relieved. |    |    | Not Improved. |    |    | Died. |    |    | Remaining. |    |    |
|-------------------|---------|-----|-----|-----------|----|----|-----------|----|----|---------------|----|----|-------|----|----|------------|----|----|
|                   | M.      | F.  | T.  | M.        | F. | T. | M.        | F. | T. | M.            | F. | T. | M.    | F. | T. | M.         | F. | T. |
| Superior . . .    | 157     | 68  | 225 | 36        | 19 | 55 | 26        | 10 | 36 | 20            | 11 | 31 | 40    | 12 | 52 | 35         | 16 | 51 |
| Good . . .        | 143     | 103 | 246 | 57        | 29 | 86 | 16        | 16 | 32 | 17            | 9  | 26 | 29    | 27 | 56 | 24         | 22 | 46 |
| Moderate . . .    | 120     | 95  | 215 | 48        | 41 | 89 | 18        | 13 | 31 | 19            | 13 | 32 | 22    | 19 | 41 | 13         | 9  | 22 |
| Indifferent . . . | 88      | 103 | 191 | 26        | 50 | 76 | 12        | 12 | 24 | 12            | 11 | 23 | 25    | 26 | 51 | 13         | 4  | 17 |
| None . . .        | 12      | 11  | 23  | 2         | 3  | 5  | 2         | —  | 2  | 2             | 1  | 3  | 4     | 6  | 10 | 2          | 1  | 3  |
| Unknown . . .     | 1       | —   | 1   | —         | —  | —  | —         | —  | —  | —             | —  | 1  | —     | 1  | —  | —          | —  | —  |

TABLE showing the per-centages of those recovered and dead, in the different degrees of education.

| Superior.  |       | Good.      |       | Moderate.  |       | Indifferent. |       | None.      |       |
|------------|-------|------------|-------|------------|-------|--------------|-------|------------|-------|
| Recovered. | Died. | Recovered. | Died. | Recovered. | Died. | Recovered.   | Died. | Recovered. | Died. |
| 21·5       | 20·4  | 35·0       | 22·78 | 41·4       | 19·07 | 40·0         | 26·7  | 22·0       | 43·5  |

That mental cultivation should bring with it its penalties as well as its advantages, and that it should occasionally elevate persons into positions whose organization is unable to bear the strain of duties and responsibilities so imposed, must be the experience of most physicians. But should education not also enable us to bear the ills of life, and intelligently avoid those causes which would injure our minds? However that may be, the preceding tables show how those whose minds have been best cultivated suffer most gravely from mental disease.

#### IV. OCCUPATIONS.

*Table showing the position in society and occupations of the cases admitted, and the results of treatment.*

*Table showing the position in society and occupations of the cases admitted, and the results of treatment—(continued).*

|                          | Totals. |    |    | Recovered |    |    | Relieved. |    |    | Not improved. |    |    | Died. |    |    | Remaining. |    |    |
|--------------------------|---------|----|----|-----------|----|----|-----------|----|----|---------------|----|----|-------|----|----|------------|----|----|
|                          | M.      | F. | T. | M.        | F. | T. | M.        | F. | T. | M.            | F. | T. | M.    | F. | T. | M.         | F. | T. |
| Soldiers and policemen . | 7       | —  | 7  | 1         | —  | 1  | 1         | —  | 1  | —             | —  | —  | 3     | —  | 3  | 2          | —  | 2  |
| Butchers . . .           | 2       | —  | 2  | —         | —  | —  | —         | —  | —  | —             | —  | —  | 2     | —  | 2  | —          | —  | —  |
| Shepherds . . .          | 1       | 3  | 4  | —         | 2  | 2  | —         | —  | —  | —             | —  | —  | 1     | —  | 1  | —          | 1  | 1  |
| Scholars . . .           | 2       | —  | 2  | 1         | —  | 1  | —         | —  | —  | —             | —  | —  | 1     | —  | 1  | —          | —  | —  |
| Washerwomen . . .        | —       | 2  | 2  | —         | 1  | 1  | —         | —  | —  | —             | —  | —  | —     | 1  | 1  | —          | —  | —  |
| Horse-dealers . . .      | 2       | —  | 2  | 1         | —  | 1  | 1         | —  | 1  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Dancing-master . . .     | 1       | —  | 1  | 1         | —  | 1  | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Musician . . .           | 1       | —  | 1  | —         | —  | —  | —         | —  | —  | —             | —  | —  | 1     | —  | 1  | —          | —  | —  |
| Weavers . . .            | 6       | 2  | 8  | 1         | 1  | 2  | 2         | —  | 2  | 1             | —  | 1  | 2     | —  | 2  | —          | 1  | 1  |
| Occupation unknown .     | 4       | 8  | 12 | 2         | 1  | 3  | —         | 1  | 1  | —             | —  | —  | 2     | 4  | 6  | —          | 2  | 2  |
| No occupation . . .      | 16      | 12 | 28 | —         | 1  | 1  | 4         | 5  | 4  | 1             | 5  | 6  | 4     | 10 | 5  | 2          | 7  |    |

TABLE showing the per-centages of recoveries and deaths of the males, in various classes of society, drawn from the foregoing table. In Class I are comprised landed proprietors, independent gentlemen, and officers in the army and navy; in II, members of the learned professions; in III, members of other professions; in IV, commercial men; and in V, artisans and labourers.

| I.<br>Proprietors. |       | II.<br>Learned<br>Professions. — |       | III.<br>Other<br>Professions. |       | IV.<br>Commercial<br>Men. |       | V.<br>Artisans. |       |
|--------------------|-------|----------------------------------|-------|-------------------------------|-------|---------------------------|-------|-----------------|-------|
| Recovered          | Died. | Recovered                        | Died. | Recovered                     | Died. | Recovered                 | Died. | Recovered       | Died. |
| 35·7               | 22·6  | 26·5                             | 25·5  | 29·1                          | 33·3  | 33·8                      | 18·5  | 40·8            | 23·6  |

A similar TABLE, showing the results among the females. Class I containing the wives, daughters, and widows of the first three classes of males in the former table; II, containing those of the commercial men; III, those of artisans and labourers.

| I.<br>Affluent. |       | II.<br>Commercial. |       | III.<br>Artisans. |       |
|-----------------|-------|--------------------|-------|-------------------|-------|
| Recovered       | Died. | Recovered          | Died. | Recovered         | Died. |
| 29·3            | 22·5  | 47·1               | 19·2  | 51·9              | 24·6  |

A glance at the foregoing tables will show that those who live by brain-work are the most severe sufferers in mental disease, since the per-cent-age of recovery amongst them is much lower, while that of death is much higher, than in any other class. The proprietor-class

are more immune from evil results, and as we descend the social scale we find the chances of recovery increase and of death diminish, except in the artisan class, where deaths are more frequent. Among the females the same general rule holds. In the affluent class there is the lowest rate of recovery and the highest of deaths; and, as among the males, in the artisan class there exists the highest percentage of recoveries and also the highest proportion of deaths.

## V. CAUSES OF INSANITY.

TABLE showing the various assigned causes of disease, and the results.

### CAUSES.—Moral.

|  | ADMISSIONS. |    |    | TERMINATIONS. |    |    |           |    |    |               |    |    |       |    |    |            |    |    |
|--|-------------|----|----|---------------|----|----|-----------|----|----|---------------|----|----|-------|----|----|------------|----|----|
|  | Totals.     |    |    | Recovered     |    |    | Relieved. |    |    | Not Improved. |    |    | Died. |    |    | Remaining. |    |    |
|  | M.          | F. | T. | M.            | F. | T. | M.        | F. | T. | M.            | F. | T. | M.    | F. | T. | M.         | F. | T. |
| Anxiety . . . . .                                | 29          | 8  | 37 | 10            | 5  | 15 | 3         | —  | 3  | 7             | —  | 7  | 7     | 2  | 9  | 2          | 1  | 3  |
| Change of mode of life . . . . .                 | 1           | 1  | 2  | —             | 1  | 1  | —         | —  | —  | —             | —  | —  | 1     | —  | 1  | —          | —  | —  |
| Disagreements, family . . . . .                  | 3           | 6  | 9  | —             | 2  | 2  | 1         | —  | 1  | —             | 1  | 1  | 1     | 2  | 3  | 1          | 1  | 2  |
| Disappointments . . . . .                        | 9           | 4  | 13 | 2             | —  | 2  | 2         | 1  | 3  | 1             | —  | 1  | 3     | 2  | 5  | 1          | 1  | 2  |
| Ditto of affection . . . . .                     | 7           | 13 | 20 | 3             | 5  | 8  | 1         | 1  | 2  | —             | 3  | 3  | 2     | 4  | 6  | 1          | —  | 1  |
| Ditto of ambition . . . . .                      | 2           | —  | 2  | —             | —  | —  | —         | —  | —  | 1             | —  | 1  | —     | —  | —  | 1          | —  | 1  |
| Ditto of business . . . . .                      | 5           | —  | 5  | 3             | —  | 3  | —         | —  | —  | —             | —  | —  | —     | 2  | —  | 2          | —  | —  |
| Distress (mental) . . . . .                      | 1           | 2  | 3  | 1             | 1  | 2  | —         | —  | —  | —             | —  | —  | —     | —  | —  | 1          | 1  | —  |
| Excitement . . . . .                             | 2           | 2  | 4  | 1             | 1  | 2  | 1         | —  | 1  | —             | —  | —  | —     | 1  | 1  | —          | —  | —  |
| Ditto at offer of marriage . . . . .             | —           | 1  | 1  | —             | —  | —  | —         | —  | 1  | 1             | —  | —  | —     | —  | —  | —          | —  | —  |
| Ditto, religious . . . . .                       | 4           | 19 | 23 | 1             | 10 | 11 | 2         | —  | 2  | 1             | 4  | 5  | —     | 5  | 5  | —          | —  | —  |
| Fear of destitution . . . . .                    | 1           | —  | 1  | —             | —  | —  | —         | —  | —  | —             | —  | —  | 1     | —  | 1  | —          | —  | —  |
| False accusations . . . . .                      | 1           | —  | 1  | —             | —  | —  | 1         | —  | 1  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Fright . . . . .                                 | 3           | 2  | 5  | —             | 1  | 1  | —         | —  | —  | 1             | —  | 1  | 2     | —  | 2  | —          | 1  | 1  |
| Family affliction . . . . .                      | 1           | 3  | 4  | —             | 1  | 1  | —         | 1  | 1  | —             | 1  | 1  | 1     | —  | 1  | —          | —  | —  |
| Grief . . . . .                                  | —           | 2  | 2  | —             | 1  | 1  | —         | 1  | 1  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Ditto at loss of friends and relatives . . . . . | 6           | 19 | 25 | 5             | 4  | 9  | —         | 4  | 4  | —             | 3  | 3  | —     | 5  | 5  | 1          | 3  | 4  |
| Ditto, a son's crime . . . . .                   | 1           | —  | 1  | —             | —  | —  | —         | —  | —  | —             | —  | —  | 1     | —  | 1  | —          | —  | —  |
| Ingratitude of a child . . . . .                 | —           | 1  | 1  | —             | —  | —  | —         | —  | —  | —             | —  | —  | 1     | —  | 1  | —          | —  | —  |
| Jealousy . . . . .                               | —           | 2  | 2  | —             | 2  | 2  | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Losses pecuniary . . . . .                       | 15          | 5  | 20 | 4             | 1  | 5  | 3         | 1  | 4  | 3             | —  | 3  | 5     | 2  | 7  | —          | 1  | 1  |
| Marriage, delight at prospect of . . . . .       | 1           | —  | 1  | —             | —  | —  | —         | —  | —  | 1             | —  | 1  | —     | —  | —  | —          | —  | —  |
| Misfortunes . . . . .                            | 3           | 1  | 4  | 3             | —  | 3  | —         | —  | —  | —             | —  | —  | —     | —  | —  | 1          | 1  | —  |
| Ditto, family . . . . .                          | 2           | 3  | 5  | —             | 1  | 1  | 1         | —  | 1  | —             | 2  | 2  | 1     | —  | 1  | —          | —  | —  |
| Nervous shock . . . . .                          | 1           | —  | 1  | —             | —  | —  | —         | —  | —  | —             | —  | —  | —     | —  | 1  | —          | 1  | —  |
| Over indulgence . . . . .                        | —           | 1  | 1  | —             | 1  | 1  | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Pride . . . . .                                  | 2           | —  | 2  | 1             | —  | 1  | —         | —  | —  | —             | —  | —  | —     | 1  | —  | 1          | —  | —  |
| Remorse . . . . .                                | 1           | —  | 1  | 1             | —  | 1  | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Solitary life . . . . .                          | 2           | —  | 2  | 1             | —  | 1  | —         | —  | —  | —             | —  | —  | —     | —  | 1  | —          | 1  | —  |
| Suspicion . . . . .                              | —           | 1  | 1  | —             | —  | —  | —         | —  | 1  | 1             | —  | —  | —     | —  | —  | —          | —  | —  |
| Treachery of a friend . . . . .                  | 1           | —  | 1  | 1             | —  | 1  | —         | —  | —  | —             | —  | —  | —     | 2  | —  | 2          | —  | —  |
| Want of occupation . . . . .                     | 2           | 1  | 3  | —             | 1  | 1  | —         | —  | —  | —             | —  | —  | 2     | —  | 2  | —          | —  | —  |

CAUSES.—*Physical.*

|  | ADMISSIONS. |    |     | TERMINATIONS. |    |    |           |    |    |               |    |    |       |    |    |            |    |    |
|--|-------------|----|-----|---------------|----|----|-----------|----|----|---------------|----|----|-------|----|----|------------|----|----|
|  | Totals.     |    |     | Recovered     |    |    | Relieved. |    |    | Not Improved. |    |    | Died. |    |    | Remaining. |    |    |
|  | M.          | F. | T.  | M.            | F. | T. | M.        | F. | T. | M.            | F. | T. | M.    | F. | T. | M.         | F. | T. |
| Ague . . . .   | 1           | —  | 1   | —             | —  | —  | —         | —  | —  | 1             | —  | 1  | —     | —  | —  | —          | —  | —  |
| Apoplexy . . . .   | 2           | —  | 2   | —             | —  | —  | —         | —  | —  | —             | —  | —  | 2     | —  | 2  | —          | —  | —  |
| Cerebral congestion . . . .                                | 5           | —  | 5   | 5             | —  | 5  | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Catalepsy . . . .  | 1           | —  | 1   | —             | —  | —  | —         | —  | —  | —             | —  | —  | 1     | —  | 1  | —          | —  | —  |
| Convulsions . . . .  | 4           | —  | 4   | 1             | —  | 1  | —         | —  | —  | 1             | —  | 1  | 1     | —  | 1  | 1          | —  | 1  |
| Cold, exposure to . . . .                                  | 2           | 4  | 6   | 2             | 2  | 4  | —         | —  | —  | —             | —  | —  | 2     | 2  | —  | —          | —  | —  |
| Climate, hot . . . .                                       | 9           | 1  | 10  | 2             | 2  | 2  | —         | —  | —  | 2             | 1  | 1  | 2     | 2  | —  | 2          | 2  | 2  |
| Dissipation . . . .  | 17          | 8  | 25  | 6             | 7  | 13 | 3         | —  | —  | 3             | 2  | —  | 2     | 5  | 1  | 6          | 1  | 1  |
| Discharge, suppressed . . . .                              | 3           | 2  | 5   | 1             | 1  | 2  | —         | 1  | 1  | 1             | —  | —  | 1     | 1  | —  | 1          | —  | —  |
| Chorea . . . .   | —           | 1  | 1   | —             | —  | —  | —         | —  | —  | —             | —  | —  | 1     | 1  | —  | —          | —  | —  |
| Dysentery . . . .  | —           | 1  | 1   | —             | —  | —  | —         | —  | —  | —             | —  | —  | 1     | 1  | —  | —          | —  | —  |
| Dyspepsia . . . .  | 1           | 7  | 8   | 1             | 3  | 4  | —         | 1  | 1  | —             | 1  | 1  | —     | 2  | 2  | —          | —  | —  |
| Development, imperfect . . . .                             | 1           | —  | 1   | —             | —  | —  | —         | —  | —  | —             | —  | —  | 1     | —  | 1  | —          | —  | —  |
| Ear, disease of . . . .                                    | 1           | —  | 1   | 1             | —  | 1  | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Erysipelas . . . .   | —           | 1  | 1   | —             | —  | —  | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Epilepsy . . . .   | 13          | 4  | 17  | 2             | 1  | 3  | —         | 1  | 1  | 3             | —  | 3  | 7     | 2  | 9  | 1          | —  | 1  |
| Fever . . . .  | 8           | 5  | 13  | 1             | 3  | 4  | 1         | —  | 1  | 2             | —  | 2  | 2     | 2  | 4  | 2          | —  | 2  |
| Ditto, typhus . . . .                                      | 1           | 4  | 5   | —             | 1  | 1  | —         | —  | —  | —             | —  | —  | 2     | 2  | 1  | 1          | 2  | —  |
| Ditto, scarlet . . . .                                     | 1           | —  | 1   | —             | —  | —  | —         | —  | —  | —             | —  | —  | 1     | —  | 1  | —          | —  | —  |
| Ditto, rheumatic . . . .                                   | 1           | —  | 1   | —             | —  | —  | —         | —  | —  | —             | —  | —  | 1     | 1  | —  | —          | —  | —  |
| Hæmorrhoids . . . .  | —           | 1  | 1   | —             | —  | —  | —         | —  | —  | 1             | 1  | —  | —     | —  | —  | —          | —  | —  |
| Hysteria . . . .   | —           | 1  | 1   | —             | —  | —  | —         | —  | —  | 1             | 1  | —  | —     | —  | —  | —          | —  | —  |
| Head, malformed . . . .                                    | 2           | —  | 2   | —             | —  | —  | —         | —  | —  | —             | —  | 1  | 1     | 1  | —  | 1          | —  | —  |
| Ditto, injury . . . .                                      | 12          | —  | 12  | 4             | —  | 4  | —         | —  | —  | 2             | —  | 2  | 4     | —  | 4  | 2          | —  | 2  |
| Intemperance . . . .                                       | 108         | 28 | 136 | 41            | 12 | 53 | 17        | 5  | 22 | 11            | 2  | 13 | 22    | 7  | 29 | 17         | 2  | 19 |
| Ill health . . . .   | 6           | 7  | 13  | 2             | 3  | 5  | —         | 1  | 1  | 1             | 2  | 3  | 2     | —  | 2  | 1          | 1  | 2  |
| Liver disease . . . .                                      | 1           | —  | 1   | —             | —  | —  | —         | 1  | —  | 1             | —  | —  | —     | —  | —  | —          | —  | —  |
| Lactation . . . .  | —           | 7  | 7   | —             | 4  | 4  | —         | —  | —  | —             | 2  | 2  | —     | —  | —  | —          | 1  | 1  |
| Masturbation . . . .                                       | 48          | —  | 48  | 18            | —  | 18 | 5         | —  | 5  | 9             | —  | 9  | 5     | —  | 5  | 11         | —  | 11 |
| Old age . . . .  | 1           | —  | 1   | —             | —  | —  | —         | —  | —  | —             | —  | —  | —     | —  | —  | 1          | —  | 1  |
| Opium eating . . . .                                       | —           | 2  | 2   | —             | —  | —  | —         | —  | 1  | 1             | —  | —  | 1     | 1  | —  | 1          | 1  | —  |
| Over-study . . . .   | 29          | 3  | 32  | 9             | 2  | 11 | 4         | 1  | 5  | 2             | —  | 2  | 6     | —  | 6  | 8          | —  | 8  |
| Over-work . . . .  | 7           | 2  | 9   | 3             | 2  | 5  | 1         | —  | 1  | —             | —  | 3  | —     | 3  | —  | —          | —  | —  |
| Puerperal state . . . .                                    | —           | 11 | 11  | —             | 7  | 7  | —         | —  | —  | —             | —  | —  | 3     | 3  | —  | 1          | 1  | —  |
| Paralysis . . . .  | 2           | 1  | 3   | —             | —  | —  | —         | —  | —  | —             | —  | 1  | 1     | 2  | 1  | —          | —  |    |
| Pleurisy . . . .   | 1           | —  | 1   | 1             | —  | 1  | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Poverty and destitution . . . .                            | 3           | 5  | 8   | 2             | 3  | 5  | 1         | —  | 1  | —             | —  | —  | 2     | 2  | —  | —          | —  | —  |
| Prison confinement . . . .                                 | 1           | —  | 1   | —             | —  | —  | —         | —  | —  | 1             | —  | 1  | —     | —  | —  | —          | —  | —  |
| Phthisis pulmonalis . . . .                                | 1           | —  | 1   | 1             | —  | 1  | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Quack's treatment . . . .                                  | 1           | —  | 1   | —             | —  | —  | —         | —  | —  | 1             | —  | 1  | —     | —  | —  | —          | —  | —  |
| Smoking, excessive . . . .                                 | 2           | —  | 2   | 1             | —  | 1  | —         | —  | —  | 1             | —  | 1  | —     | —  | —  | —          | —  | —  |
| Sun stroke . . . .   | 6           | —  | 6   | 3             | —  | 3  | 1         | —  | 1  | —             | —  | —  | 1     | —  | 1  | 1          | 1  | 1  |
| Scrofula . . . .   | 2           | 1  | 3   | —             | —  | —  | —         | —  | 1  | 1             | —  | —  | 1     | —  | 1  | 1          | 1  | 1  |
| Smallpox . . . .   | 1           | —  | 1   | 1             | —  | 1  | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| Uterine disorder . . . .                                   | —           | 32 | 32  | —             | 8  | 8  | —         | 5  | 5  | —             | 6  | 6  | —     | 9  | 9  | —          | 4  | 4  |
| Mental disease ascribed to hereditary transmission . . . . | 50          | 62 | 112 | 15            | 15 | 30 | 9         | 9  | 18 | 4             | 10 | 14 | 11    | 11 | 22 | 11         | 17 | 28 |
| Unknown . . . .  | 60          | 82 | 142 | 9             | 29 | 38 | 14        | 12 | 26 | 10            | 5  | 15 | 13    | 21 | 34 | 14         | 15 | 29 |

TABLE showing the per-centages of recoveries and deaths in the cases of insanity produced by moral and physical causes.

| Moral Causes. |      |       |      | Physical Causes. |      |       |      |
|---------------|------|-------|------|------------------|------|-------|------|
| Recovered.    |      | Died. |      | Recovered.       |      | Died. |      |
| M.            | F.   | M.    | F.   | M.               | F.   | M.    | F.   |
| 34·9          | 39·1 | 25·4  | 24·7 | 31·8             | 36·7 | 22·4  | 22·2 |
| Total 36·9    |      | 25·1  |      | 33·8             |      | 22·7  |      |

The assigned causes are divided into moral and physical, and it appears that the former causes produce a disease which is more curable, but also more deadly, than the latter. Moral causes are assigned among the males in 20 per cent., and among the females in 25. The physical causes are by far the most frequent, being for the males and females respectively 80 and 75 per cent. These results agree with Dr. Hood's.\* There are certain causes, however, which seem to produce the most curable forms of mental disease; these are, various kinds of mental anxiety, religious excitement, dissipation, intemperance, bodily ailments, poverty, and the puerperal state. Such causes are at once removed when the case comes under care into an asylum, and the disease, consequently, more readily disappears. On the other hand, when the cause is traceable to great pecuniary losses, to afflictions that appear irremediable, to climate, to grave lesions of the nervous system, to fever, and to disease of the uterus, the cases less seldom recover. In a former † number of this Journal, I have treated of heredity in insanity; here on that subject it need only be remarked that heredity predisposition was found in 49·61 per cent. of the whole number of admissions, and that the disease was attributed to heredity *solely* in 12· per cent. of the cases.

\* Op. cit., p. 57.

† 'Journal of Mental Science,' April, 1863.

## VI. AGE ON FIRST ATTACK.

TABLE showing the age at first attack, and the results of treatment.

| YEARS.    |    |   | ADMISSIONS. |    |     | TERMINATIONS. |    |    |           |    |    |               |    |    |       |    |    |            |
|-----------|----|---|-------------|----|-----|---------------|----|----|-----------|----|----|---------------|----|----|-------|----|----|------------|
|           |    |   | TOTALS.     |    |     | RECOVERED     |    |    | RELIEVED. |    |    | NOT IMPROVED. |    |    | DIED. |    |    | REMAINING. |
|           |    |   | M.          | F. | T.  | M.            | F. | T. | M.        | F. | T. | M.            | F. | T. | M.    | F. | T. |            |
| Under 10  | 10 | . | 13          | 6  | 19  | —             | —  | —  | 3         | 1  | 4  | 2             | 1  | 3  | 4     | 2  | 6  | 4 2 6      |
| 10 to 15  | .  | . | 7           | 4  | 11  | 3             | 2  | 5  | 1         | —  | 1  | 1             | —  | 1  | 1     | 2  | 3  | 1 — 1      |
| 15 "      | 20 | . | 52          | 22 | 74  | 18            | 8  | 26 | 8         | 2  | 10 | 9             | 4  | 13 | 7     | 4  | 11 | 10 4 14    |
| 20 "      | 25 | . | 63          | 40 | 103 | 23            | 10 | 33 | 12        | 5  | 17 | 8             | 9  | 17 | 9     | 10 | 19 | 11 6 17    |
| 25 "      | 30 | . | 69          | 42 | 111 | 20            | 18 | 38 | 8         | 4  | 12 | 7             | 6  | 13 | 17    | 10 | 27 | 17 4 21    |
| 30 "      | 35 | . | 43          | 32 | 75  | 9             | 12 | 21 | 4         | 6  | 10 | 6             | 3  | 9  | 15    | 5  | 20 | 9 6 15     |
| 35 "      | 40 | . | 31          | 44 | 75  | 5             | 15 | 20 | 6         | 8  | 14 | 5             | 5  | 10 | 9     | 12 | 21 | 6 4 10     |
| 40 "      | 45 | . | 38          | 36 | 74  | 14            | 14 | 28 | 1         | 5  | 6  | 11            | 5  | 16 | 11    | 6  | 17 | 1 6 7      |
| 45 "      | 50 | . | 22          | 31 | 53  | 6             | 12 | 18 | 1         | 3  | 4  | —             | 2  | 2  | 12    | 9  | 21 | 3 5 8      |
| 50 "      | 55 | . | 8           | 9  | 17  | 2             | 4  | 6  | 3         | —  | 3  | 1             | —  | 1  | 2     | 3  | 5  | — 2 2      |
| 55 "      | 60 | . | 12          | 11 | 23  | 2             | 3  | 5  | 2         | 1  | 3  | 3             | —  | 3  | 4     | 5  | 9  | 1 2 3      |
| 60 "      | 65 | . | 6           | 5  | 11  | 1             | —  | 1  | —         | —  | —  | 1             | 1  | 2  | 4     | 2  | 6  | — 2 2      |
| 65 "      | 70 | . | 4           | 4  | 8   | 1             | 2  | 3  | —         | —  | —  | 1             | —  | 1  | 1     | 2  | 3  | 1 — 1      |
| 70 "      | 75 | . | 1           | —  | 1   | 1             | —  | 1  | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          |
| 75 "      | 80 | . | 1           | 1  | 2   | —             | 1  | 1  | —         | —  | —  | —             | —  | —  | —     | —  | —  | 1 — 1      |
| Unknown . | .  | . | 87          | 52 | 139 | 32            | 19 | 51 | 16        | 11 | 27 | 7             | 4  | 11 | 20    | 13 | 33 | 12 5 17    |

In this table the cases readmitted have been taken out, so that we have the period of life shown at which mental disease first appeared in the individual patients. The method pursued in making this table is the following:—The duration of attack prior to admission was deducted from the age on admission, and in cases in which a prior attack had occurred the age at the beginning of that attack was ascertained and noted. Those cases in which the disease is said to have begun under ten years of age are congenital cases of idiocy or imbecility.

TABLE showing the per-centages of recovered and died, the age on first attack being arranged in decennial periods.

| AGES IN YEARS. | PER-CENTAGE ON ADMISSIONS. | PER-CENTAGE RECOVERED. | PER-CENTAGE DIED. |
|----------------|----------------------------|------------------------|-------------------|
| 10 to 20       | 9·4                        | 36·4                   | 16·47             |
| 20 " 30        | 23·7                       | 33·1                   | 21·4              |
| 30 " 40        | 16·64                      | 27·3                   | 27·3              |
| 40 " 50        | 14·1                       | 36·2                   | 29·9              |
| 50 " 60        | 4·43                       | 27·5                   | 35·0              |
| 60 " 70        | 2·1                        | 21·0                   | 47·4              |
| 70 " 80        | ·33                        | —                      | —                 |

## VII. NUMBER OF ATTACKS.

TABLE showing the number of attacks and the results of treatment.

|                | ADMISSIONS. |     |     | TERMINATIONS. |    |     |           |    |    |               |    |    |       |    |     |            |    |     |
|----------------|-------------|-----|-----|---------------|----|-----|-----------|----|----|---------------|----|----|-------|----|-----|------------|----|-----|
|                | Totals.     |     |     | Recovered.    |    |     | Relieved. |    |    | Not Improved. |    |    | Died. |    |     | Remaining. |    |     |
|                | M.          | F.  | T.  | M.            | F. | T.  | M.        | F. | T. | M.            | F. | T. | M.    | F. | T.  | M.         | F. | T.  |
| First . . .    | 354         | 245 | 599 | 93            | 75 | 168 | 51        | 33 | 84 | 57            | 32 | 89 | 88    | 68 | 156 | 65         | 37 | 102 |
| Second . . .   | 74          | 60  | 134 | 30            | 33 | 63  | 12        | 7  | 19 | 7             | 7  | 14 | 18    | 8  | 26  | 7          | 5  | 12  |
| Third . . .    | 19          | 23  | 42  | 9             | 11 | 20  | 1         | 4  | 5  | 1             | 1  | 2  | 7     | 4  | 11  | 1          | 3  | 4   |
| Frequent . . . | 53          | 33  | 86  | 32            | 20 | 52  | 6         | 3  | 9  | 2             | 1  | 3  | 4     | 4  | 8   | 9          | 5  | 14  |
| Unknown . . .  | 21          | 19  | 40  | 5             | 3  | 8   | 4         | 4  | 8  | 3             | 4  | 7  | 4     | 6  | 10  | 5          | 2  | 7   |

TABLE showing the per-centages of the first, second, third, or frequent attacks in the admissions, and also the proportion of recoveries and deaths in each of those attacks.

|                | Per Cent. on Admissions. | Per Cent. Recovered. | Per Cent. Died. |
|----------------|--------------------------|----------------------|-----------------|
| First . . .    | 66·48                    | 28·04                | 26·04           |
| Second . . .   | 14·87                    | 47·01                | 19·4            |
| Third . . .    | 6·99                     | 47·6                 | 26·2            |
| Frequent . . . | 9·54                     | 60·46                | 9·8             |

The results in these tables are sufficiently obvious. Sixty-six and a half of the cases admitted are first attacks, and of these the recoveries are lower, and the deaths higher, than in subsequent attacks. When the attacks become frequent the per-cent of recoveries is high.

## VIII. DURATION OF ATTACK PRIOR TO ADMISSION.

TABLE showing the duration of mental disease, and the results of treatment.

|               | ADMISSIONS. |    |     | TERMINATIONS. |    |     |           |    |    |               |    |    |       |    |    |            |    |    |
|---------------|-------------|----|-----|---------------|----|-----|-----------|----|----|---------------|----|----|-------|----|----|------------|----|----|
|               | Totals.     |    |     | Recovered.    |    |     | Relieved. |    |    | Not Improved. |    |    | Died. |    |    | Remaining. |    |    |
|               | M.          | F. | T.  | M.            | F. | T.  | M.        | F. | T. | M.            | F. | T. | M.    | F. | T. | M.         | F. | T. |
| 1 Month . . . | 125         | 95 | 220 | 73            | 58 | 131 | 15        | 13 | 28 | 7             | 5  | 12 | 17    | 14 | 31 | 13         | 5  | 18 |
| 2 " "         | 38          | 29 | 67  | 18            | 17 | 35  | 4         | 2  | 6  | 4             | 4  | 8  | 10    | 3  | 13 | 2          | 3  | 5  |
| 3 " "         | 37          | 24 | 61  | 13            | 14 | 27  | 7         | —  | —  | 7             | 7  | 7  | 8     | 6  | 14 | 2          | 4  | 6  |
| 4 " "         | 16          | 12 | 28  | 6             | 5  | 11  | —         | 2  | 2  | 4             | 1  | 5  | 5     | 2  | 7  | 1          | 2  | 3  |
| 5 " "         | 9           | 3  | 12  | 1             | 2  | 3   | 1         | —  | —  | 1             | 3  | —  | 3     | 2  | —  | 2          | 2  | 1  |
| 6 " "         | 13          | 21 | 34  | 6             | 8  | 14  | 1         | 2  | 3  | 1             | 4  | 5  | 5     | 6  | 11 | —          | 1  | 1  |
| 9 " "         | 10          | 9  | 19  | 3             | 2  | 5   | 1         | 3  | 4  | 1             | —  | 1  | 2     | 2  | 4  | 3          | 2  | 5  |
| 12 " "        | 38          | 25 | 63  | 8             | 8  | 16  | 6         | 7  | 13 | 5             | 3  | 8  | 13    | 3  | 16 | 6          | 4  | 10 |
| 18 " "        | 15          | 9  | 24  | 4             | 2  | 6   | 2         | 2  | 4  | —             | —  | —  | 6     | 3  | 9  | 3          | 2  | 5  |
| 2 Years . . . | 40          | 15 | 55  | 7             | 4  | 11  | 8         | 2  | 10 | 8             | 2  | 10 | 9     | 6  | 15 | 8          | 1  | 9  |
| 3 " "         | 25          | 14 | 39  | 7             | 3  | 10  | 2         | 1  | 3  | 4             | 3  | 7  | 5     | 5  | 10 | 7          | 2  | 9  |
| 4 " "         | 29          | 13 | 42  | 4             | —  | —   | 4         | 5  | 2  | 7             | 7  | 2  | 9     | 6  | 7  | 13         | 7  | 2  |
| 5 " "         | 15          | 7  | 22  | 3             | —  | —   | 3         | 1  | 1  | 2             | 3  | 3  | 6     | 4  | 3  | 7          | 4  | —  |
| 6 " "         | 9           | 11 | 20  | 2             | 2  | 4   | 2         | 2  | 4  | 1             | 3  | 4  | 1     | 1  | 2  | 3          | 3  | 6  |
| 8 " "         | —           | —  | —   | —             | —  | —   | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| 10 " "        | 18          | 18 | 36  | —             | 2  | 2   | 4         | 3  | 7  | 3             | 3  | 6  | 5     | 7  | 12 | 6          | 3  | 9  |
| 12 " "        | —           | —  | —   | —             | —  | —   | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| 15 " "        | 9           | 13 | 22  | —             | 1  | 1   | 3         | 2  | 5  | 2             | 2  | 4  | 3     | 2  | 5  | 1          | 6  | 7  |
| 18 " "        | —           | —  | —   | —             | —  | —   | —         | —  | —  | —             | —  | —  | —     | —  | —  | —          | —  | —  |
| 20 " "        | 14          | 15 | 29  | —             | —  | —   | 1         | 2  | 3  | 2             | 3  | 5  | 7     | 8  | 15 | 4          | 2  | 6  |
| 30 " "        | 11          | 8  | 19  | —             | —  | —   | 2         | 1  | 3  | 1             | 1  | 2  | 3     | 2  | 5  | 5          | 4  | 9  |
| 40 " "        | 3           | 1  | 4   | —             | —  | —   | —         | —  | —  | 1             | —  | 1  | 1     | —  | 1  | 1          | 1  | 2  |
| Unknown . . . | 47          | 38 | 85  | 14            | 14 | 28  | 9         | 4  | 13 | 6             | 6  | 12 | 9     | 10 | 19 | 9          | 4  | 13 |

The good effects of early treatment are here well shown, for it may be observed that those admitted within a month of the origin of the disease recover at the rate of 59·5 per cent., and those within three months at the rate of 55·4 per cent.; while as the periods become longer before treatment is adopted the proportion of recoveries diminish, so that the recoveries may be said to be in direct proportion to the duration of the disease prior to admission. It is, however, to be remarked that violence in the early stage of insanity frequently necessitates immediate removal to an asylum of cases which are the most curable; we must therefore take the nature of the case itself, as well as the early supervision into consideration, in estimating the curative effects of asylum treatment. The percentage of deaths of those admitted within three months of the origin of the attack is 13·7, whilst of those whose disease had existed ten years it is 34·5, the average proportion being 23·4.

## IX. BODILY HEALTH.

TABLE showing the condition of bodily health in those admitted, and the results of treatment.

|                   | ADMISSIONS. |     |     | TERMINATIONS. |    |     |           |    |    |               |    |    |       |    |    |            |    |    |
|-------------------|-------------|-----|-----|---------------|----|-----|-----------|----|----|---------------|----|----|-------|----|----|------------|----|----|
|                   | Totals.     |     |     | Recovered.    |    |     | Relieved. |    |    | Not Improved. |    |    | Died. |    |    | Remaining. |    |    |
|                   | M.          | F.  | T.  | M.            | F. | T.  | M.        | F. | T. | M.            | F. | T. | M.    | F. | T. | M.         | F. | T. |
| Good . . .        | 271         | 174 | 445 | 93            | 59 | 152 | 38        | 24 | 62 | 34            | 24 | 58 | 41    | 34 | 75 | 65         | 33 | 98 |
| Indifferent . . . | 151         | 135 | 286 | 56            | 61 | 117 | 27        | 17 | 44 | 18            | 17 | 35 | 32    | 26 | 58 | 18         | 14 | 32 |
| Bad . . .         | 97          | 71  | 168 | 19            | 22 | 41  | 8         | 10 | 18 | 18            | 4  | 22 | 48    | 30 | 78 | 4          | 5  | 9  |
| Unknown . . .     | 2           | —   | 2   | 1             | —  | 1   | 1         | —  | 1  | —             | —  | —  | —     | —  | —  | —          | —  | —  |

TABLE of per-centages showing the proportion of those having, on admission, good, indifferent, or bad health, and the per-centages of recoveries and deaths.

|                   | Per Cent. on Admissions. | Per Cent. Recovered. | Per Cent. Died. |
|-------------------|--------------------------|----------------------|-----------------|
| Good . . .        | 49·38                    | 34·1                 | 16·8            |
| Indifferent . . . | 31·74                    | 40·9                 | 20·28           |
| Bad . . .         | 18·64                    | 24·46                | 46·4            |

## X. AGE ON ADMISSION.

TABLE showing, in quinquennial periods, the age on admission of the cases, and the results.

| Years.         | Totals. |    |     | Recovered. |    |    | Relieved. |    |    | Not Improved. |    |    | Died. |    |    | Remaining. |    |    |
|----------------|---------|----|-----|------------|----|----|-----------|----|----|---------------|----|----|-------|----|----|------------|----|----|
|                | M.      | F. | T.  | M.         | F. | T. | M.        | F. | T. | M.            | F. | T. | M.    | F. | T. | M.         | F. | T. |
| Under 10 . . . | 2       | 1  | 3   | —          | —  | —  | —         | —  | —  | —             | —  | —  | 2     | 1  | 3  | —          | —  | —  |
| 10 to 15 . . . | 1       | 1  | 2   | 1          | 1  | —  | —         | —  | —  | —             | —  | —  | —     | —  | —  | 1          | —  | 1  |
| 15 " 20 . . .  | 27      | 15 | 42  | 14         | 7  | 21 | 6         | 2  | 8  | 2             | 1  | 3  | 2     | 3  | 5  | 3          | 2  | 5  |
| 20 " 25 . . .  | 77      | 24 | 101 | 28         | 9  | 37 | 11        | 5  | 16 | 13            | 5  | 18 | 14    | 3  | 17 | 11         | 2  | 13 |
| 25 " 30 . . .  | 77      | 45 | 122 | 23         | 16 | 39 | 9         | 4  | 13 | 11            | 11 | 22 | 8     | 10 | 18 | 26         | 4  | 30 |
| 30 " 35 . . .  | 59      | 35 | 94  | 16         | 16 | 32 | 13        | 4  | 17 | 6             | 2  | 8  | 17    | 6  | 23 | 7          | 7  | 14 |
| 35 " 40 . . .  | 60      | 56 | 116 | 20         | 20 | 40 | 8         | 9  | 17 | 9             | 5  | 14 | 13    | 16 | 29 | 10         | 6  | 16 |
| 40 " 45 . . .  | 58      | 49 | 107 | 9          | 19 | 28 | 10        | 9  | 19 | 8             | 11 | 19 | 20    | 6  | 26 | 11         | 4  | 15 |
| 45 " 50 . . .  | 39      | 54 | 93  | 13         | 23 | 36 | 2         | 6  | 8  | 4             | 3  | 7  | 15    | 12 | 27 | 5          | 10 | 15 |
| 50 " 55 . . .  | 32      | 30 | 62  | 15         | 12 | 27 | 4         | 2  | 6  | 5             | 1  | 6  | 6     | 8  | 14 | 2          | 7  | 9  |
| 55 " 60 . . .  | 18      | 25 | 43  | 8          | 6  | 14 | 1         | 1  | 2  | 2             | 2  | 4  | 5     | 9  | 14 | 2          | 7  | 9  |
| 60 " 65 . . .  | 15      | 12 | 27  | 5          | 3  | 8  | 1         | 1  | 2  | 2             | 2  | 4  | 5     | 3  | 8  | 2          | 3  | 5  |
| 65 " 70 . . .  | 7       | 7  | 14  | 1          | 2  | 3  | —         | —  | —  | 1             | —  | 1  | 4     | 5  | 9  | 1          | —  | 1  |
| 70 " 75 . . .  | 5       | 1  | 6   | 1          | 1  | 2  | 1         | —  | —  | 1             | 1  | —  | 1     | 2  | —  | 2          | —  | —  |
| 75 " 80 . . .  | 3       | 2  | 5   | 1          | 1  | 2  | —         | 1  | 1  | 1             | —  | 1  | —     | —  | —  | 1          | —  | 1  |
| Unknown . . .  | 41      | 23 | 64  | 15         | 6  | 21 | 8         | 7  | 15 | 5             | 2  | 7  | 8     | 8  | 16 | 5          | —  | 5  |

TABLE showing the per-centages of recoveries and deaths, in decennial periods, of age on admission.

| Ages 20 to 30. |       | 30 to 40.  |       | 40 to 50.  |       | 50 to 60.  |       | 60 to 70.  |       |
|----------------|-------|------------|-------|------------|-------|------------|-------|------------|-------|
| Recovered.     | Died. | Recovered. | Died. | Recovered. | Died. | Recovered. | Died. | Recovered. | Died. |
| 34·0           | 15·7  | 34·0       | 25·2  | 32·0       | 26·5  | 38·0       | 26·6  | 25·0       | 41·0  |

From the foregoing tables it appears that the most recoveries take place in those whose age on admission is between 15 and 20, and in those between 45 and 55. This is probably owing to changes that take place in the development of man at or about these periods, predisposing to less severe attacks of mental disease. Of the deaths, it will be seen that they steadily increase in proportion to age.

## XI. FORM OF MENTAL DISEASE.

TABLE showing the results of treatment of various forms of mental disease.

|                          | ADMISSIONS. |     |     |            |     |     | TERMINATIONS. |     |     |               |     |     |       |     |     |            |     |     |
|--------------------------|-------------|-----|-----|------------|-----|-----|---------------|-----|-----|---------------|-----|-----|-------|-----|-----|------------|-----|-----|
|                          | Totals.     |     |     | Recovered. |     |     | Relieved.     |     |     | Not Improved. |     |     | Died. |     |     | Remaining. |     |     |
|                          | M.          | F.  | T.  | M.         | F.  | T.  | M.            | F.  | T.  | M.            | F.  | T.  | M.    | F.  | T.  | M.         | F.  | T.  |
| Idiocy . . .             | 6           | 3   | 9   | ...        | ... | ... | 1             | 1   | 2   | ...           | ... | ... | 3     | 1   | 4   | 2          | 1   | 3   |
| Imbecility . . .         | 10          | 6   | 16  | ...        | ... | ... | 2             | 1   | 3   | 2             | 1   | 3   | 2     | 2   | 4   | 4          | 2   | 6   |
| Dementia . . .           | 35          | 18  | 53  | 2          | 2   | 4   | 3             | 3   | 6   | 8             | 5   | 13  | 9     | 6   | 15  | 13         | 2   | 15  |
| Fatuity . . .            | 44          | 22  | 66  | ...        | ... | ... | 5             | 3   | 8   | 5             | 4   | 9   | 16    | 12  | 28  | 18         | 3   | 21  |
| Monomania . . .          | 2           | 1   | 3   | ...        | ... | ... | 1             | 1   | 1   | ...           | 1   | 1   | ...   | 1   | 1   | ...        | 1   | ... |
| Ditto of pride . . .     | 28          | 21  | 49  | 17         | 4   | 21  | 3             | 2   | 5   | ...           | 4   | 4   | 6     | 7   | 13  | 2          | 4   | 6   |
| Ditto of suspicion . . . | 38          | 35  | 73  | 8          | 4   | 12  | 11            | 5   | 16  | 7             | 5   | 12  | 4     | 11  | 15  | 8          | 10  | 18  |
| Ditto of fear . . .      | 6           | 2   | 8   | 2          | 1   | 3   | 3             | ... | 3   | ...           | ... | ... | ...   | 1   | 1   | 1          | ... | 1   |
| Ditto of vanity . . .    | 3           | 2   | 5   | 1          | ... | 1   | 1             | 1   | 2   | ...           | ... | ... | 1     | 1   | 1   | 1          | ... | 1   |
| Ditto of ambition . . .  | 12          | 1   | 13  | 5          | ... | 5   | 1             | ... | 1   | 3             | ... | 3   | 3     | ... | 3   | ...        | 1   | 1   |
| Moral insanity . . .     | 3           | 1   | 4   | 2          | 1   | 3   | 1             | ... | 1   | ...           | ... | ... | ...   | ... | ... | ...        | ... | ... |
| Melancholia . . .        | 85          | 102 | 187 | 38         | 49  | 87  | 16            | 17  | 33  | 6             | 9   | 15  | 17    | 15  | 32  | 8          | 12  | 20  |
| Mania . . .              | 173         | 154 | 327 | 70         | 73  | 143 | 20            | 14  | 34  | 25            | 17  | 42  | 31    | 33  | 64  | 27         | 17  | 44  |
| Dipsomania . . .         | 35          | 11  | 46  | 24         | 7   | 31  | 7             | 3   | 10  | 1             | ... | 1   | 1     | 1   | 2   | 2          | ... | 2   |
| General paralysis . . .  | 41          | 1   | 42  | ...        | 1   | 1   | ...           | ... | ... | 12            | ... | 15  | 28    | ... | 28  | 1          | ... | 1   |

TABLE showing the proportions of the different forms of mental disease, and the per-centages of recovered and died in each form.

| Forms of Mental Disease. | Per Centages on Admissions. | Per Cent. Recovered. | Per Cent. Died. |
|--------------------------|-----------------------------|----------------------|-----------------|
| Melancholia . . .        | 20·7                        | 46·4                 | 17·0            |
| Mania . . .              | 36·29                       | 43·6                 | 19·8            |
| Monomania . . .          | 16·7                        | 27·8                 | 21·2            |
| Dipsomania . . .         | 5·1                         | 67·3                 | 4·0             |
| Fatuity and dementia . . | 13·3                        | 3·3                  | 36·1            |
| General paralysis . .    | 4·6                         | —                    | —               |
| Congenital cases . .     | 2·7                         | —                    | —               |

The preceding tables show that next to dipsomania in curability is melancholia, and, after that, mania and monomania. Dipsomania is, however, frequently entered in the books as being recovered from, but the recovery only lasts, with too many cases, while the patient is under care in an asylum. Of the cases of general paralysis, one only is said to have recovered, and all the rest have been discharged, not improved, have died, or remain under treatment.

## XII. DURATION OF ATTACK.

TABLE showing the duration of attack and the results of treatment.

| ADMISSIONS.   | TERMINATIONS. |    |    |           |     |     |           |     |     |               |     |     |       |     |     |            |     |     |
|---------------|---------------|----|----|-----------|-----|-----|-----------|-----|-----|---------------|-----|-----|-------|-----|-----|------------|-----|-----|
|               | Totals.       |    |    | Recovered |     |     | Relieved. |     |     | Not Improved. |     |     | Died. |     |     | Remaining. |     |     |
|               | M.            | F. | T. | M.        | F.  | T.  | M.        | F.  | T.  | M.            | F.  | T.  | M.    | F.  | T.  | M.         | F.  | T.  |
| 1 Month . . . | 1             | 1  | 2  | ...       | ... | ... | ...       | ... | ... | ...           | ... | ... | 1     | 1   | 1   | 1          | 1   | 1   |
| 2 " . . .     | 7             | 7  | 14 | 3         | 3   | 6   | 2         | 1   | 3   | ...           | ... | ... | 2     | 3   | 5   | ...        | ... | ... |
| 3 "           | 15            | 11 | 26 | 13        | 10  | 23  | ...       | ... | ... | 1             | 1   | 2   | ...   | 2   | ... | ...        | ... | ... |
| 6 "           | 40            | 36 | 76 | 21        | 24  | 45  | 4         | 5   | 9   | 5             | ... | 5   | 10    | 4   | 14  | ...        | 3   | 3   |
| 9 "           | 40            | 30 | 70 | 23        | 24  | 47  | 3         | 1   | 4   | 4             | 2   | 6   | 8     | 2   | 10  | 2          | 1   | 3   |
| 12 "          | 34            | 30 | 64 | 22        | 17  | 39  | 4         | 4   | 8   | 5             | 2   | 7   | 3     | 5   | 8   | ...        | 2   | 2   |
| 18 "          | 53            | 38 | 91 | 26        | 21  | 47  | 6         | 7   | 13  | 8             | 3   | 11  | 8     | 5   | 13  | 5          | 2   | 7   |
| 2 Years . . . | 21            | 12 | 33 | 8         | 7   | 15  | 3         | 4   | 7   | 2             | 1   | 3   | 7     | ... | 7   | 1          | ... | 1   |
| 3 "           | 47            | 30 | 77 | 13        | 11  | 24  | 11        | 7   | 18  | 6             | 4   | 10  | 15    | 7   | 22  | 2          | 1   | 3   |
| 4 "           | 33            | 17 | 50 | 8         | 5   | 13  | 6         | 4   | 10  | 6             | 3   | 9   | 10    | 3   | 13  | 3          | 2   | 5   |
| 5 "           | 28            | 8  | 36 | 6         | ... | 6   | 7         | 1   | 8   | 7             | 1   | 8   | 5     | 3   | 8   | 3          | 3   | 6   |
| 6 "           | 13            | 11 | 24 | 2         | 2   | 4   | 2         | 3   | 5   | 3             | 3   | 6   | 3     | 2   | 5   | 3          | 1   | 4   |
| 8 "           | 11            | 14 | 25 | 2         | ... | 2   | 3         | 3   | 6   | 4             | 4   | 8   | 2     | 4   | 6   | ...        | 3   | 3   |
| 10 "          | 27            | 23 | 50 | 6         | 3   | 9   | 4         | 1   | 5   | 3             | 3   | 6   | 6     | 10  | 16  | 8          | 6   | 14  |
| 15 "          | 27            | 20 | 47 | 1         | 1   | 2   | 4         | 1   | 5   | 4             | 3   | 7   | 8     | 10  | 18  | 10         | 5   | 15  |
| 20 "          | 30            | 24 | 54 | 1         | 1   | 2   | 3         | 2   | 5   | 4             | 5   | 9   | 11    | 10  | 21  | 11         | 6   | 17  |
| 30 "          | 33            | 17 | 50 | ...       | ... | ... | 1         | 1   | 2   | 2             | 4   | 6   | 8     | 5   | 13  | 22         | 7   | 29  |
| 40 "          | 11            | 9  | 20 | ...       | ... | ... | 2         | 1   | 3   | 1             | ... | 1   | 2     | 5   | 7   | 6          | 3   | 9   |
| 50 "          | 3             | 4  | 7  | ...       | ... | ... | 1         | 1   | ... | ...           | ... | 2   | 1     | 3   | 1   | 2          | 3   | 4   |
| Unknown . . . | 47            | 38 | 85 | 14        | 13  | 27  | 9         | 4   | 13  | 6             | 6   | 12  | 9     | 10  | 19  | 9          | 5   | 14  |

TABLE of per-centages of recoveries and deaths in those cases in which the attack was known to have terminated in recovery or death; the per-centages being calculated on the totals of recoveries and deaths, according to the duration of the attack.

| 1 Year.               |       | 2 Years.             |       | 3 Years.             |       | 4 Years.             |       | 5 Years.             |       |
|-----------------------|-------|----------------------|-------|----------------------|-------|----------------------|-------|----------------------|-------|
| Recovered.            | Died. | Recovered.           | Died. | Recovered.           | Died. | Recovered.           | Died. | Recovered.           | Died. |
| 80·0<br>in 200 cases. | 20·0  | 75·6<br>in 82 cases. | 24·3  | 52·1<br>in 46 cases. | 49·1  | 50·0<br>in 20 cases. | 50·0  | 42·8<br>in 14 cases. | 57·1  |
| 6 Years.              |       | 8 Years.             |       | 10 Years.            |       | 15 Years.            |       | 20 Years.            |       |
| Recovered.            | Died. | Recovered.           | Died. | Recovered.           | Died. | Recovered.           | Died. | Recovered.           | Died. |
| 44·4<br>in 9 cases.   | 55·5  | 25·0<br>in 8 cases.  | 75·0  | 36·0<br>in 25 cases. | 64·0  | 10·0<br>in 20 cases. | 9·0   | 8·6<br>in 23 cases.  | 91·3  |

The preceding tables are made by finding in each case the duration of attack before admission, and adding that to the period of residence in the asylum. Of course it is only in those cases that recover or die that we can obtain the exact duration of the mental disease. In those discharged relieved and not improved, and in those remaining, we have no data for ascertaining the duration of the attack. From the table of per-centages it will be seen that the greatest number of attacks are under one year's duration, and also that as the attack is prolonged so are the recoveries fewer, while the deaths increase. The attacks lasting under two years and above one are terminated by death in 24·4 per cent., whilst in those under five and above four, there is a much higher mortality, in fact, 57 per cent., and so on, until we find that the disease terminates only with life.

## XIII. DURATION OF RESIDENCE.

TABLE showing the duration of residence of the cases admitted, and the results of treatment.

| ADMISSIONS.     |         |    |     | TERMINATIONS. |     |     |           |     |     |               |     |     |       |    |    |            |     |    |   |
|-----------------|---------|----|-----|---------------|-----|-----|-----------|-----|-----|---------------|-----|-----|-------|----|----|------------|-----|----|---|
|                 | Totals. |    |     | Recovered     |     |     | Relieved. |     |     | Not Improved. |     |     | Died. |    |    | Remaining. |     |    |   |
|                 | M.      | F. | T.  | M.            | F.  | T.  | M.        | F.  | T.  | M.            | F.  | T.  | M.    | F. | T. | M.         | F.  | T. |   |
| 1 Month . . . . | 19      | 11 | 30  | 3             | 4   | 7   | 2         | 1   | 3   | 2             | 1   | 3   | 11    | 5  | 16 | 1          | ... | 1  |   |
| 2 " . . . .     | 9       | 9  | 18  | 5             | 6   | 11  | 1         | ... | 1   | ...           | ... | ... | 2     | 1  | 3  | 1          | 2   | 3  |   |
| 3 " . . . .     | 49      | 39 | 88  | 23            | 24  | 47  | 4         | 5   | 9   | 9             | 3   | 12  | 11    | 5  | 16 | 2          | 2   | 4  |   |
| 6 " . . . .     | 82      | 54 | 136 | 41            | 32  | 73  | 12        | 8   | 20  | 16            | 8   | 24  | 12    | 4  | 16 | 1          | 2   | 3  |   |
| 9 " . . . .     | 35      | 31 | 66  | 16            | 21  | 37  | 6         | 3   | 9   | 7             | 2   | 9   | 5     | 5  | 10 | 1          | ... | 1  |   |
| 12 " . . . .    | 84      | 60 | 144 | 35            | 28  | 63  | 18        | 16  | 34  | 10            | 4   | 14  | 11    | 8  | 19 | 10         | 4   | 14 |   |
| 18 " . . . .    | 36      | 18 | 54  | 18            | 12  | 30  | 4         | 2   | 6   | 5             | 3   | 8   | 6     | 1  | 7  | 3          | ... | 3  |   |
| 2 Years . . . . | 42      | 27 | 69  | 15            | 4   | 19  | 10        | 6   | 16  | 8             | 8   | 16  | 9     | 6  | 15 | ...        | 3   | 3  |   |
| 3 " . . . .     | 30      | 27 | 57  | 5             | 6   | 11  | 7         | 4   | 11  | 3             | 4   | 7   | 9     | 7  | 16 | 6          | 6   | 12 |   |
| 4 " . . . .     | 19      | 15 | 34  | 1             | 2   | 3   | 6         | 1   | 7   | 2             | 1   | 3   | 8     | 8  | 16 | 2          | 3   | 5  |   |
| 5 " . . . .     | 11      | 15 | 26  | 2             | ... | 2   | 1         | 1   | 2   | ...           | 4   | 4   | 4     | 5  | 6  | 11         | 3   | 4  | 7 |
| 6 " . . . .     | 13      | 12 | 25  | ...           | 2   | 2   | 1         | 1   | 2   | 4             | 1   | 5   | 3     | 5  | 8  | 5          | 3   | 8  |   |
| 8 " . . . .     | 5       | 7  | 12  | 1             | ... | 1   | ...       | ... | ... | ...           | 1   | 1   | 1     | 3  | 4  | 3          | 3   | 6  |   |
| 10 " . . . .    | 26      | 16 | 42  | 3             | 1   | 4   | 1         | 1   | 2   | 1             | ... | 1   | 9     | 11 | 20 | 12         | 3   | 15 |   |
| 15 " . . . .    | 21      | 22 | 43  | ...           | ... | ... | ...       | ... | ... | 2             | 2   | 4   | 9     | 13 | 22 | 10         | 7   | 17 |   |
| 20 " . . . .    | 24      | 14 | 38  | 1             | ... | 1   | 1         | 2   | 3   | 1             | 3   | 4   | 7     | 1  | 8  | 14         | 8   | 22 |   |
| 24 " . . . .    | 16      | 3  | 19  | ...           | ... | ... | ...       | ... | ... | ...           | ... | 3   | 1     | 4  | 13 | 2          | 15  |    |   |

TABLE showing the per-cent of the recovered and died, according to the duration of residence.

| Time Resident.        | Per-cent in Admissions. | Per Cent. Recovered. | Per Cent. Died. |
|-----------------------|-------------------------|----------------------|-----------------|
| 1 Month . . . .       | 3.33                    | 23.3                 | 53.3            |
| 2 " . . . .           | 2.0                     | 61.1                 | 16.6            |
| 3 " . . . .           | 9.7                     | 53.4                 | 18.1            |
| 6 " . . . .           | 15.09                   | 53.6                 | 11.7            |
| 1 Year . . . .        | 23.3                    | 47.6                 | 13.8            |
| 2 " . . . .           | 13.65                   | 39.8                 | 17.8            |
| 3 " . . . .           | 6.32                    | 19.29                | 28.0            |
| 4 " . . . .           | 3.77                    | 8.8                  | 47.0            |
| 5 " . . . .           | 2.88                    | 7.6                  | 42.3            |
| 6 " . . . .           | 2.77                    | 8.0                  | 32.0            |
| 8 to 24 Years . . . . | 17.09                   | 3.89                 | 37.6            |

The preceding tables are interesting when compared with those immediately before them, as showing that patients are very frequently brought to be treated in an asylum when the chance of arresting the mental disease, or even saving life, is past. Thus, it will be seen that there are almost no attacks of insanity lasting only for a month or less, as shown in the first of the two tables under the twelfth section; yet there is, as seen in those now under consideration, a great number of cases that terminate, one way or another, within a month of admission. Of these more than one half die, and only a fourth recover. If, however, we are able to tide over the first month's residence the chances of death are much diminished, and the chances of recovery improve. In the long periods of residence the per-centages of recoveries gradually fall, while those of death rise.

To exhibit, at a glance, the results of treatment of cases admitted year by year into an asylum, is the object of the following table. The number of patients of each sex admitted during each year are placed in the first column, and the other columns show the results at the end of 1864 of the cases so admitted. Some of the cases were, of course, only for a short time under observation, while others were the subjects of treatment for various periods up to twenty-five years. As year follows year there are always found some cases remaining in the asylum, and their gradual accumulation shows how the space in an old establishment gets filled up by incurable cases. Of the patients admitted in the opening year of this institution only eight now remain, and every year tells heavily on the small residue, so that it may almost now be said that the first generation of patients of the Crichton Institution has passed away. In the table following will be found the readmissions arranged in the same manner, and showing the frequency of readmission in individual cases.

TABLE showing the number of patients admitted each year into the Crichton Royal Institution, and the results at end of December, 1864.

| Years. | Totals.<br>Admitted. |     |     | Recovered. |     |     | Relieved. |     |     | Not<br>Improved. |     |     | Died. |     |     | Remain-<br>ing. |     |     | Result<br>unknown. |     |     |
|--------|----------------------|-----|-----|------------|-----|-----|-----------|-----|-----|------------------|-----|-----|-------|-----|-----|-----------------|-----|-----|--------------------|-----|-----|
|        | M.                   | F.  | T.  | M.         | F.  | T.  | M.        | F.  | T.  | M.               | F.  | T.  | M.    | F.  | T.  | M.              | F.  | T.  | M.                 | F.  | T.  |
| 1839   | 37                   | 26  | 63  | 7          | 11  | 18  | 4         | ... | 4   | 6                | 1   | 7   | 13    | 13  | 26  | 7               | 1   | 8   | ...                | ... | ... |
| 1840   | 28                   | 16  | 44  | 6          | 8   | 14  | 4         | 1   | 5   | 4                | 4   | 8   | 10    | 3   | 13  | 4               | ... | 4   | ...                | ... | ... |
| 1841   | 26                   | 20  | 46  | 5          | 6   | 11  | 4         | 3   | 7   | 4                | 3   | 7   | 12    | 8   | 20  | 1               | ... | 1   | ...                | ... | ... |
| 1842   | 29                   | 6   | 35  | 15         | 2   | 17  | 3         | ... | 3   | 2                | 1   | 3   | 7     | 3   | 10  | 2               | ... | 2   | ...                | ... | ... |
| 1843   | 23                   | 20  | 43  | 7          | 4   | 11  | 5         | 3   | 8   | 2                | 1   | 3   | 8     | 10  | 18  | 1               | 2   | 3   | ...                | ... | ... |
| 1844   | 17                   | 17  | 34  | 8          | 7   | 15  | ...       | 2   | 2   | 1                | 2   | 3   | 6     | 4   | 10  | 2               | 2   | 4   | ...                | ... | ... |
| 1845   | 23                   | 23  | 46  | 11         | 8   | 19  | 3         | 2   | 5   | 2                | 4   | 6   | 5     | 7   | 12  | 2               | 2   | 4   | ...                | ... | ... |
| 1846   | 21                   | 28  | 49  | 6          | 8   | 14  | 5         | 4   | 9   | 3                | 3   | 6   | 5     | 10  | 15  | 2               | 2   | 4   | ...                | 1   | 1   |
| 1847   | 31                   | 23  | 54  | 14         | 7   | 21  | 3         | 1   | 4   | 2                | 1   | 3   | 10    | 11  | 21  | 1               | 3   | 4   | 1                  | ... | 1   |
| 1848   | 17                   | 17  | 34  | 5          | 9   | 14  | 4         | 3   | 7   | ...              | 1   | 1   | 2     | 3   | 5   | 4               | ... | 4   | 2                  | 1   | 3   |
| 1849   | 17                   | 22  | 39  | 2          | 10  | 12  | 4         | 1   | 5   | 3                | ... | 3   | 3     | 6   | 9   | 5               | 1   | 6   | ...                | 4   | 4   |
| 1850   | 10                   | 7   | 17  | 3          | 3   | 6   | 1         | ... | 1   | 2                | 3   | 5   | ...   | 1   | 1   | 4               | ... | 4   | ...                | ... | ... |
| 1851   | 15                   | 17  | 32  | 6          | 4   | 10  | 3         | 4   | 7   | 1                | 2   | 3   | 5     | 3   | 8   | ...             | 3   | 3   | ...                | 1   | 1   |
| 1852   | 13                   | 18  | 31  | 4          | 11  | 15  | 1         | 1   | 2   | 3                | 2   | 5   | 5     | 3   | 8   | ...             | 1   | 1   | ...                | ... | ... |
| 1853   | 19                   | 6   | 25  | 3          | ... | 3   | 6         | 2   | 8   | 2                | 2   | 4   | 1     | 2   | 3   | 7               | ... | 7   | ...                | ... | ... |
| 1854   | 22                   | 9   | 31  | 3          | 2   | 5   | 1         | 1   | 2   | 6                | 1   | 7   | 6     | 2   | 8   | 5               | 3   | 8   | 1                  | ... | 1   |
| 1855   | 19                   | 13  | 32  | 8          | 6   | 14  | 1         | 3   | 4   | 4                | 1   | 5   | 5     | 2   | 7   | 1               | 1   | 2   | ...                | ... | ... |
| 1856   | 14                   | 8   | 22  | 6          | 5   | 11  | 1         | 3   | 4   | 1                | ... | 1   | 5     | ... | 5   | 1               | ... | 1   | ...                | ... | ... |
| 1857   | 14                   | 10  | 24  | 5          | 2   | 7   | 4         | 2   | 6   | 1                | 1   | 2   | 1     | ... | 1   | 3               | 5   | 8   | ...                | ... | ... |
| 1858   | 16                   | 10  | 26  | 4          | 1   | 5   | 2         | 2   | 4   | 3                | 3   | 6   | 4     | ... | 4   | 3               | 4   | 7   | ...                | ... | ... |
| 1859   | 10                   | 10  | 20  | 1          | 4   | 5   | 2         | 1   | 3   | 3                | 3   | 6   | 2     | ... | 2   | 2               | 2   | 4   | ...                | ... | ... |
| 1860   | 9                    | 6   | 15  | 4          | 1   | 5   | 1         | 2   | 3   | 2                | ... | 2   | 2     | 1   | 3   | ...             | 2   | 2   | ...                | ... | ... |
| 1861   | 17                   | 8   | 25  | 7          | 3   | 10  | 3         | 2   | 5   | 1                | ... | 1   | 2     | ... | 2   | 4               | 3   | 7   | ...                | ... | ... |
| 1862   | 22                   | 15  | 37  | 5          | 5   | 10  | 1         | 4   | 5   | 5                | 1   | 6   | 2     | ... | 2   | 9               | 5   | 14  | ...                | ... | ... |
| 1863   | 8                    | 9   | 17  | 3          | 5   | 8   | 1         | ... | 1   | 1                | ... | 1   | 1     | ... | 1   | 2               | 4   | 6   | ...                | ... | ... |
| 1864   | 17                   | 13  | 30  | 6          | 1   | 7   | ...       | 1   | 1   | 1                | ... | 1   | ...   | 2   | 2   | 10              | 9   | 19  | ...                | ... | ... |
|        | 494                  | 377 | 871 | 154        | 133 | 287 | 67        | 48  | 115 | 65               | 40  | 105 | 122   | 94  | 216 | 82              | 55  | 137 | 4                  | 7   | 11  |

\* In 11 cases, 4 males and 7 females, the results are unknown.

## PATIENTS READMITTED.

*Results at end of December, 1864.*

| Years.               | Totals Admitted. |     |     | Recovered |     |     | Relieved. |     |     | Not Improved. |     |     | Died. |     |     | Remaining. |     |     |     |
|----------------------|------------------|-----|-----|-----------|-----|-----|-----------|-----|-----|---------------|-----|-----|-------|-----|-----|------------|-----|-----|-----|
|                      | M.               | F.  | T.  | M.        | F.  | T.  | M.        | F.  | T.  | M.            | F.  | T.  | M.    | F.  | T.  | M.         | F.  | T.  |     |
| 1840 . . . . .       | 3                | 2   | 5   | 1         | ... | 1   | 1         | 1   | 2   | ...           | 1   | 1   | 1     | ... | 1   | ...        | 1   | ... | 1   |
| 1841 . . . . .       | 1                | 2   | 3   | 2         | 2   | 2   | ...       | ... | ... | ...           | ... | 1   | ...   | 1   | ... | 1          | ... | 1   |     |
| 1842 . . . . .       | 1                | 1   | 2   | 1         | 1   | 2   | ...       | ... | ... | ...           | ... | ... | ...   | ... | 1   | 1          | 1   | ... | 1   |
| 1843 { 2nd . . . . . | 1                | 2   | 3   | 1         | 1   | 1   | 1         | 1   | 1   | ...           | ... | ... | ...   | ... | 1   | 1          | 1   | ... | 1   |
| 1844 { 2nd . . . . . | 3                | 1   | 4   | 1         | 1   | 2   | 2         | 2   | 2   | 2             | ... | ... | ...   | ... | 1   | 1          | 1   | ... | 1   |
| 1845 . . . . .       | 2                | 4   | 6   | 2         | 1   | 3   | 2         | 2   | 2   | 2             | 2   | 2   | 2     | 2   | 1   | 1          | 1   | ... | 1   |
| 1846 { 4th . . . . . | 2                | 2   | 4   | 1         | ... | 1   | 1         | 1   | 1   | ...           | 1   | 1   | 2     | 1   | 1   | 1          | 1   | ... | 1   |
| 1847 { 5th . . . . . | 4                | ... | 4   | 1         | ... | 1   | 1         | 1   | 1   | ...           | 1   | 1   | 2     | 2   | 2   | 2          | 2   | ... | 2   |
| 1848 { 6th . . . . . | 3                | 1   | 4   | 2         | 1   | 3   | 1         | 1   | 1   | 1             | ... | 1   | 1     | ... | ... | ...        | ... | ... | ... |
| 1849 { 2nd . . . . . | 5                | 2   | 7   | 2         | ... | 2   | 1         | 1   | 1   | 1             | 1   | 1   | 1     | 1   | 1   | 1          | 2   | 2   | 2   |
| 1850 . . . . .       | 1                | ... | 1   | ...       | ... | ... | ...       | ... | ... | ...           | ... | ... | ...   | 1   | ... | 1          | ... | 1   | 1   |
| 1851 { 2nd . . . . . | 2                | 2   | 4   | 2         | 1   | 3   | ...       | 1   | 1   | ...           | ... | ... | ...   | ... | 1   | 1          | 1   | ... | 1   |
| 1852 { 2nd . . . . . | 2                | 3   | 5   | ...       | 1   | 1   | ...       | ... | ... | 2             | 2   | 2   | 2     | 1   | 1   | 1          | 1   | 1   | 1   |
| 1853 { 2nd . . . . . | 1                | ... | 1   | ...       | ... | ... | ...       | ... | ... | ...           | ... | ... | ...   | 1   | ... | 1          | ... | 1   | 1   |
| 1854 . . . . .       | 2                | 2   | 4   | 1         | 2   | 3   | 1         | 1   | 1   | ...           | ... | ... | ...   | ... | 1   | 1          | 1   | 1   | 1   |
| 1855 { 2nd . . . . . | 3                | 1   | 4   | 2         | ... | 2   | ...       | ... | ... | ...           | ... | ... | 1     | 1   | 1   | 1          | 1   | 1   | 1   |
| 1855 { 3rd . . . . . | 1                | 1   | 2   | 1         | ... | 1   | 1         | 1   | 1   | 1             | 1   | 1   | 1     | 1   | 1   | 1          | 1   | 1   | 1   |
| 1856 { 2nd . . . . . | 2                | ... | 2   | 2         | 2   | 2   | 2         | 2   | 2   | ...           | ... | ... | 1     | 1   | 2   | 2          | 2   | 1   | 1   |
| 1857 { 4th . . . . . | 1                | ... | 4   | 4         | 1   | 1   | 1         | 1   | 1   | 1             | 1   | 1   | 1     | 1   | 2   | 2          | 2   | 2   | 2   |
| 1858 { 2nd . . . . . | 3                | ... | 3   | 2         | ... | 2   | 2         | 2   | 2   | ...           | 1   | 1   | 1     | 1   | 1   | 1          | 1   | 1   | 1   |
| 1859 . . . . .       | 1                | ... | 1   | 1         | ... | 1   | 1         | 1   | 1   | 1             | 1   | 1   | 1     | 1   | 1   | 1          | 1   | 1   | 1   |
| 1860 { 2nd . . . . . | 2                | 1   | 3   | ...       | 1   | 1   | 1         | 1   | 1   | 2             | 2   | 2   | 2     | 2   | 2   | 2          | 2   | 2   | 2   |
| 1860 { 4th . . . . . | 1                | ... | 1   | 1         | 1   | 1   | 1         | 1   | 1   | ...           | ... | ... | ...   | ... | 1   | 1          | 1   | 1   | 1   |
| 1861 . . . . .       | 1                | ... | 1   | 1         | 1   | 1   | 1         | 1   | 1   | ...           | ... | ... | ...   | ... | 1   | 1          | 1   | 1   | 1   |
| 1862 . . . . .       | 2                | 2   | 4   | 2         | 1   | 3   | ...       | 1   | 1   | ...           | ... | ... | ...   | ... | 1   | 1          | 1   | 1   | 1   |
| 1863 { 3rd . . . . . | 1                | 1   | 2   | 1         | 1   | 2   | ...       | 1   | 1   | ...           | ... | ... | ...   | ... | 2   | 2          | 2   | 2   | 2   |
| 1863 { 5th . . . . . | 1                | ... | 1   | 1         | 1   | 1   | 1         | 1   | 1   | 1             | 1   | 1   | 1     | 1   | 1   | 1          | 1   | 1   | 1   |
| 1864 { 2nd . . . . . | 4                | 3   | 7   | 2         | 1   | 3   | ...       | 1   | 1   | ...           | ... | ... | ...   | ... | 2   | 2          | 2   | 2   | 2   |
| 1864 { 3rd . . . . . | 3                | ... | 3   | 2         | ... | 2   | 2         | 2   | 2   | 2             | ... | ... | ...   | ... | 1   | 1          | 1   | 1   | 1   |
| 1864 { 4th . . . . . | 1                | ... | 1   | 1         | 1   | 1   | 1         | 1   | 1   | 1             | 1   | 1   | 1     | 1   | 1   | 1          | 1   | 1   | 1   |
|                      | 73               | 46  | 119 | 38        | 21  | 59  | 9         | 6   | 15  | 8             | 4   | 12  | 7     | 6   | 13  | 11         | 9   | 20  |     |

From the preceding statistics we have ascertained that in regard to—

### I. *Sex.*

1. There were 16 per cent. more males than females under treatment.
2. That the females recover more readily than the males.
3. That the number of deaths in each sex is nearly equal.

### II. *Domestic Condition.*

1. That most of the patients were single.
2. That the highest proportion of recoveries was among the married, the next among the single, and the lowest among the widowed.
3. That the smallest proportion of deaths was among the married, a higher among the single, and the highest in the widowed.
4. That the married with offspring had a much greater chance of recovery, and a much less chance of death, than the married without offspring.

### III. *Education.*

1. That those having a superior education recover less frequently than those whose minds are not so highly cultivated.
2. That those having moderate and indifferent educations have the best chance of recovery.
3. That the highest mortality occurs among those whose education is indifferent.

### IV. *Occupation.*

1. That members of the learned professions have much less chance of recovery than men in any other occupation.
2. That artisans have the largest proportion of recoveries among them, proprietors next, commercial men next, and architects, engineers, &c., next.
3. That death is more frequent among the members of the professions, and less so among the other classes.
4. That among the females the fewest recoveries are among the affluent class, and the greatest in the commercial and artisan class.
5. That the deaths among females are more frequent in the artisan and affluent than in the commercial class.

### V. *Cause.*

1. That the ascribed cause of insanity is much more frequently physical than moral.
2. That moral causes are more frequent among the females than the males.

3. That moral causes, both among males and females, produce an insanity more easily curable than physical causes.
4. That death in both sexes occurs more frequently among cases of mental disease produced by moral than by physical causes.
5. That one half of the cases were hereditary, and that 12 per cent. of them were ascribed entirely to hereditary transmission.
6. That the cases produced by easily removable causes are the most curable.

#### *VI. Age at which the Insanity first appeared.*

1. That the greatest number of first attacks occur between the ages of 20 and 30 years.
2. That the highest per-centages of recoveries occur in those attacked at the climacteric period, namely, between the ages of 10 and 20, and 40 and 50 years.
3. That the recoveries are next most frequent in those first attacked between 20 and 30 ; and that as life advances (with the exception of those in the disorder mentioned in the preceding paragraph) the chances of recovery diminish.
4. That the per-cent of death is higher the greater the ages at the first appearance of the insanity.

#### *VII. Number of Attacks.*

1. That 66 per cent. of the cases admitted are first, 15 per cent. second, 7 per cent. third, and 9 per cent. frequent attacks.
2. That by far the lowest proportion of recoveries takes place in those that suffer from the first attack, and that those having a second or frequent attacks recover in a much higher proportion.
3. That the proportion of deaths is higher in the first, and generally lower in the frequent attacks.

#### *VIII. Duration of Attack prior to Admission.*

1. That the earlier the patient is placed under treatment the greater is his chance of recovery.
2. That the number of deaths is fewer in those admitted soon after the appearance of insanity, than in those in which the disease has existed for longer periods.

#### *IX. Bodily Health.*

1. That nearly one half of the cases had good bodily health ; that in 31 per cent. it was indifferent, and in 18 per cent. it was bad.
2. That the recoveries were high among those having good, but highest in those having indifferent, and lowest in those having bad health.
3. That the deaths were lowest in the first class, intermediate in the second, and highest in the third.

*X. Age on Admission.*

1. That the greatest number of patients admitted are between the ages of 20 and 50.
2. That most recoveries take place in those whose age is between 15 and 20, and 45 and 55, the two climacteric periods (see heading VI).
3. That the proportion of deaths steadily increases in proportion to age.

*XI. Form of Mental Disorder.*

1. That mania was the most frequent form of mental alienation ; next melancholia, next monomania, and next dementia.
2. That after dipsomania, melancholia was the most curable, and after it mania and monomania.
3. That the deaths were most frequent in fatuity and dementia, less so in monomania ; and that in mania and melancholia they were in the lowest proportion.

*XII. Duration of Attack.*

1. That the greatest number of attacks of mental disease last for less than one year.
2. That the longer the attack the fewer the recoveries.
3. That the longer the attack the greater become the proportion of deaths.

*XIII. Duration of Residence in the Asylum.*

1. That the mass of cases remain less than one year in the asylum.
2. That such cases are the most curable.
3. That more than a half of those cases that remain only for a month die, and that in those remaining six months the mortality reaches its minimum, and thereafter, in the longer periods of residence, on the whole, increasing.

*Artificial Insanity, chiefly in relation to Mental Pathology.* By  
 DANIEL HACK TUKE, M.D., formerly Visiting Medical Officer  
 to the York Retreat.

(Concluded from 'Journal of Mental Science,' April, 1865, p. 66.)

*Enumeration of physical symptoms (continued).*—With regard to the contraction of the pupil which in the first instance takes place, it is doubtless due to the act of shortening the focal distance when gazing at a near object.\* Dilatation succeeds, and continues even during the early stage of the nervous sleep, but after some time has elapsed, the pupils contract as in ordinary sleep. During both periods—that of dilatation and the subsequent contraction—the pupils, according to Mr. Braid, are insensible to light.

It would be easy to extend this enumeration of physical symptoms by including those of the advanced or complete stage of Braidism, but for the present purpose I am anxious to restrict myself to the early stage, as that which illustrates the object I have directly in view—the pathology of insanity.

It will be seen that the symptoms are slight; the difficulty with even these is to be quite sure that they are necessary accompaniments, and not accidental complications. Thus, there may be no acceleration, but a lowering, of the pulse in the earliest stage, prior to any general muscular rigidity, and when the eyes are but gently raised. Again, the congestion of the conjunctiva does not prove there is any cerebral fulness, but may be wholly due to straining the eyeballs. In short, I believe that a very remarkable susceptibility to suggestions may be induced without any apparent change in the bodily condition, a fact which is paralleled, sufficiently often, by the state of some insane persons.

Slight, however, as are the symptoms, there are indications of incipient or partial unconsciousness—such are confusion of thought, vertigo, headache, &c. These are early signs of ultimate loss of consciousness, just as in the approach of ordinary sleep one of the external senses becomes dulled before the others; *e.g.* we are alive to sounds when the retina is no longer sensitive to light.\*

Returning, then, to the question, What is the condition of the brain which accompanies the mental symptoms I have described as artificially induced? it must be confessed it is less difficult to say what it is not, than what it is. But this need not excite surprise when so familiar a condition as that of ordinary sleep remains obscurely defined and imperfectly understood. Negative knowledge

\* Erratum in former communication—p. 66, line 15, for iris, read pupil.

is, however, sometimes only one degree less useful than positive knowledge.

It might be supposed, that in those cases in which there has been a prolonged stare, a paralysing effect has been produced upon the optic and third pair of nerves. We might refer the dilatation of the pupil to the temporary paralysis of the third pair—the radiating fibres of the iris, supplied by the sympathetic—being allowed free play.\* What is the condition of the ganglionic system in the brain? Is it in its ordinary condition, or excited to unusual action, or is it likewise more or less paralysed? If we take M. Laverdant's experience as a fair type of the symptoms of a mild form of artificial insanity, we might argue that there is increased action or irritation of this system, causing contraction of the cerebral arteries—less oxygenated blood—and congestion of the cerebral veins. With this would accord the dilated pupil, as in irritation of the cervical sympathetic by galvanism. Nor does it seem very improbable that the ganglionic system in the brain is closely connected with involuntary, automatic, mental acts, when the Will, from whatever cause, becomes paralysed.

On the other hand, some reasons might be brought forward to show that a sedative influence had been exercised upon the sympathetic, causing increased afflux of arterial blood at the early stage of Braidism.

If we suppose it irregularly and partially excited to action, we should expect partial contraction of the cerebral capillaries, allowing of more vascular action in some parts of the encephalon, and less in others. All that can be safely said, in the absence of sufficient data, is that there is a certain amount of disorder of the cerebral circulation, some change in the relation between the supply of venous and

\* Why is the pupil contracted in sleep? One might have expected it would be dilated, seeing that the action of the ganglionic system is not suspended. A medical friend maintains, indeed, that the pupil is dilated, but is forced to contract by the examiner's attempts to raise the eyelid and by the employment of light. My own observations on children, however, made with great care as regards light, convince me that contraction is the rule. Dr. Hughlings Jackson has, also, in his examinations of the eye with the ophthalmoscope, invariably found the pupil contracted. That this is not due merely to the introduction of light seems clearly proved by the fact that the pupil is often *more* contracted during sleep than when the patient is awake, subjected to the same amount of light. Dr. Jackson examined the eye of a somnambulist (a girl), and found the pupil not so much contracted as in ordinary sleep. The pupil of the other eye, to which atropine had been applied, was as large as when the patient was awake. After being roused, the girl fell into a natural sleep. The arteries of the retina became then a little smaller and the veins larger—their usual condition in sleep as observed by Dr. Jackson.

Thus, if we may take the vascular condition of the retina as an index to that of the brain, the usual opinion that there is less arterial and more venous blood in the cerebrum during sleep seems to be correct. It would be interesting to employ the ophthalmoscope to determine the condition of the cerebral circulation in hypnotism, both in the conscious and unconscious stage.

arterial blood. Suppressed respiration, the natural consequence of fixed attention upon one object, must also have some effect in interfering with the healthy oxygenation of blood.

Whatever the vaso-motor changes may be, they are no doubt sufficient to cause or to result from partial action of the brain, involving the irregular excitement of its functions—exaltation of some mental powers, exhaustion and depression of others. That the physical part of the process adopted by Mr. Braid has some influence in *causing* vaso-motor changes, and therefore irregular excitement of the cerebral functions, is very probable; but we must think it much more generally the case that the psychical part of the process induces them—is, in fact, the fundamental condition—and essentially the first agent in the train of phenomena, the consequence being an accumulation of so-called nervous force and vascularity in one part, and less in others. Thus, a person who is sensitive, especially if he has once been subjected to the hypnotic process, may subsequently pass into the state solely from expectant attention, no physical means whatever being employed. “Those,” Mr. Braid observes, “who are naturally highly susceptible, at length become so much so as to be liable to be affected entirely through the power of the imagination, belief, and habit, *i. e.* the expectant idea will produce it in such subjects when no process whatever, either near or distant, is going forward; whereas, if they are made to believe the contrary, through the requisite attention and expectation being otherwise engaged, they may not become affected by processes which would naturally throw them into the sleep.”

I do not by any means deny that we may reach the same goal by different approaches—now by physical, now by psychical agents—any more than I would deny that insanity may be produced, now by a directly physical cause, as a blow on the head, now by a moral cause, as fright. The succession of phenomena is reversed, but the accompanying capillary change may be, either at first or at last, identical. We must admit, therefore, that it would be illogical to conclude that, because similar effects may be subsequently produced by expectant attention, the method first employed did not produce or *assist* in producing the same results. We do not conclude, because a bread pill taken by a sensitive patient, under the impression that it is Pil. Rhei co., acts as much as a purgative as the real rhubarb pill he took the previous week, that therefore the rhubarb did not purge. Ask a sensitive woman, who has been galvanized, to grasp the handles of a sham battery, and we know what would very probably be the result. Rogers tells the story of a gentleman who used to catch cold when he slept without his nightcap, but found that when he went out to lodge, and had forgotten to take it with him, he could prevent himself having a catarrh by simply tying a string round his head. And I have known a case similar to that which

the same writer relates, of another curious result from expectant attention. A lady sat at dinner opposite a plate-glass window, and caught a troublesome cold, solely from the belief that it was open. But would it be logical to conclude that, because the imagination can cause a cold in the head, an open window or the casting an accustomed article of dress cannot? I am, therefore, quite prepared to guard against this fallacy when insisting, as I do still insist, upon the importance of recognising the wide influence of expectant attention—faith, fear, belief, imagination.

I incline, then, to hold that the most important element in the production of hypnotic phenomena is the psychical one—attention. In fact, it would seem impossible to separate the act of attention from any physical process adopted to cause loss of volition and suggestive susceptibility. Even in the experiment of the fowl already referred to, it may be doubted whether the effects are not simply due to an arrest of attention, consequent upon being placed in an unusual position, rather than to any straining of the eyes, the lateral situation of which may prevent the chalk line falling within the range of vision.\*

In Braidism, then, or in artificial insanity, we may regard the first act as that of the Mind or Will forcing the attention upon a certain object or idea. The Will becomes after a certain time exhausted—paralysed—and the attention is left without its accustomed master and rightful lord. Involuntary action succeeds, with or without consciousness, except in regard to the ideas suggested. The controlling, regulating Will—the I—being deprived of power, the balance of the mental functions is lost, and, like the general of an army who has ordered his men to attack a beleaguered city, and finds, when too late, he is unable to call them off from deeds of blind and impulsive fury, the Will no longer possesses the power of recalling and directing the attention. What is this but the fundamental condition of insanity? Esquirol would have called it a lesion of the attention, but it looks more like a lesion of the Will, the attention being still in full though blind action, and directed automatically, by other agents, towards a certain course of thought; the succession of ideas being no longer spontaneous, but determined in artificial insanity by vocal suggestions; in non-artificial insanity by countless influences, external and internal. For example, a man loses his wife; the event is here the agent; the Will allows the attention to become absorbed in this one idea, and after a time is unable to call it away; a morbid habit of thought and feeling follows, and insanity results. In both cases—natural and artificial insanity—a certain amount of predisposition seems to be requisite.

In attempting, then, to determine the condition of the brain in

\* Subsequent experiments convince me that the effect may be produced without drawing any line. I have found it impossible to influence some fowls.

artificial insanity, it must not be forgotten that the mere act of concentrating the attention doubtless acts on the circulation. That contemporaneously with any changes in the cerebral circulation which may occur, there are others of a so-called dynamic character; that there is some alteration in the *vis nervosa* has been already intimated. It is another question whether, as is now generally supposed, this nervous force is identical with electricity. If such be the case, it may be there is some break in the electric circuit—some disturbance of the electric tension—by which one or more portions of the encephalic mass have their normal action suspended, while others remain in their usual condition, or in one of increased activity. It must, however, be added, that Mr. Braid found that the phenomena were not affected by electrifying his patients first, whether positively or negatively. May there not, lastly, be simply a change in the arrangement of the nervous cells resembling the changes in the kaleidoscope, which, in the twinkling of an eye, would completely alter the mind's perceptions, yet the cells themselves be not diseased? However, and this is the main practical fact I wish to insist upon, whether we suppose the occurrence of electrical changes, or only those of a vaso-motor character influencing the circulation, and of course necessitating slight molecular or cellular changes, the change which has taken place is what is usually called (however incorrectly) "functional." No change which pathologists are accustomed to call organic (though involving an organ, as all functional disorder must) has occurred. The change may, in fact, only differ in degree, and the part of the brain affected, from that which takes place during sleep and dreaming, which no physiologist supposes to involve anything which it would be proper to call a lesion of the nervous tissue, or any opacity of the membranes or other change to be detected in a *post-mortem* examination, either by scalpel or microscope; although there may be transient cellular or vascular changes, similar to those which doubtless occur in all mental operations whatever. The mere fact of their being transient does not affect the *kind* of change; time is not a fundamental element in the definition of disease.

In reference to the terms functional and organic, I would not deny that that condition of a compound organ in which one portion is exhausted or asleep while other parts are in action is one which may, if it is preferred, be called organic; but this is not what is usually understood by the term. One or more functions are in abeyance, and therefore many call such a condition functional. But whether we speak of functional or organic, let two things be clearly understood—first, that no functional change can occur without a material change; and secondly, that for practical purposes there are two very different classes or stages of disease, in one of which there is, and in the other there is not, structural or textural lesion.

In the state now under consideration—artificial insanity—the whole mind is concentrated upon one idea; the brain force is intensified in one direction; some parts of the encephalon are dormant, while others are acutely susceptible to impressions.

What these respectively are must still be a matter of speculation. We may, however, in accordance with modern cerebral physiology, suppose that the sensorium is more or less healthily awake, but that the hemispherical ganglia are so far dormant that the Will is in abeyance, while they remain acutely alive to impressions from without, the ideo-motor power remaining in full force, and able to manifest itself in acts corresponding to the ideas suggested. Thus, not only may a man be made to believe his name is Napoleon, but along with this belief he will assume attitudes and act in various ways in accordance with it, precisely as the monomaniac acts, similarly possessed with a false conviction.

It will be observed that in hallucinations and illusions of the special senses, when artificially induced by *vocal* suggestions, the sensory ganglia and their nerves are not primarily at fault, but are simply overborne and misled by the false ideas infused into the mind. The senses do not deceive the mind, but the mind is unable to be affected or instructed by them.

In ordinary somnambulism we observe the sleep-walker oblivious, when awake, of what he has done when asleep. In artificial somnambulism this may be the case; but if the hemispherical ganglia are only very partially asleep, the subject remembers what has passed through his mind—his irresistible convictions and acts—as a dreamer remembers his, or much more distinctly. Dr. Carpenter ('Human Physiology,' 4th edit., p. 831) records the fact of a medical friend being partially hypnotized, and distinctly remembering afterwards his uncontrollable actions during that state, when directed by Mr. Braid. When double consciousness occurs, we see the thoughts and acts which have been artificially induced, wholly forgotten when the subject is awake, and clearly remembered again when the artificial state is reinduced. Mr. Braid states that he has had most intelligent patients, who had a minute recollection of what took place during the sleep six years before, and described the same facts many times after, *when hypnotized*, but who had not the slightest recollection of them when awake. Here, again, we see, artificially produced, the exact parallel of what occurs occasionally in asylums; patients after years of insanity (*e.g.* melancholy with stupor) emerging from that condition and remembering nothing of it, but recalling their previous life and resuming it where, so to speak, it left off.

When the illusory condition of artificial insanity is not remembered, we cannot infer, from such non-remembrance, that the cerebral hemispheres are wholly asleep, as we are perhaps justified in

doing in pure sleep-walking. But where the mind is peculiarly alive to suggested ideas, adopts them as its own, and acts (however automatically) in obedience to them, the hemispheres must be supposed to be, in some degree, in action. That this may happen, and yet there be no remembrance afterwards, shows that ideo-motor action of the cerebrum may occur without being recalled, and finds its counterpart in some cases of mental disease. If Dr. Carpenter's view be correct, that the cerebral hemispheres are not themselves the seat of consciousness, but that we become conscious of their states through the sensorium, we can understand how the cerebrum may be sufficiently awake to respond to appropriate mental stimuli, and produce ideo-motor acts, but not sufficiently aroused to admit of memory.

Sufficient consciousness to respond to vocal suggestions without remembrance of the acts performed in consequence, is a phenomenon frequently observed during broken sleep, especially that of children, and is well illustrated in the well-known history of a military somnambulist related by Abercrombie. There can be little doubt that his condition was essentially hypnotic, the character of the dream being determined by suggestion. (See 'Inquiries concerning the Intellectual Powers,' 7th edit., p. 279.)

It would seem probable, then, that, as a general rule, in artificial insanity, the sensorium (comprising in this term the corpora striata, the optic thalami, and the nerves and their ganglia) is awake, while the hemispheres are so partially awake as only to admit of automatic action, the will being paralysed, consciousness being more or less perfect, but, in some cases, the memory of the artificial state of existence not being retained afterwards. The phenomena exhibited by hypnotized or biologized persons will of course vary, endlessly, according to the degree in which they are affected, the striking circumstance being that the outward signs may be so slight, while the internal change is (for the time) so great.

If, then, we regard the probable *kind* of change which takes place in the brain in artificial insanity, we cannot, I think, but conclude when we turn to the precisely analogous symptoms of insanity which we have not induced, that they also *may* coexist with a condition of brain similar in kind, and sometimes similar also in degree.

This is the pathological conclusion to which I am primarily anxious to call attention; at the same time, from it may flow important inferences in regard to the prognosis and treatment of certain forms of insanity.

But an obvious objection suggests itself to this proposition, namely, that the difference between the transitory phases of artificial insanity and the non-artificial state may be precisely such as makes all the difference between (so-called) functional, and organic disease; and that hence the conclusion on which I lay most stress is not a

logical one. I at once admit that, while the facts of artificial insanity prove beyond doubt that any amount of delusion and illusion may coexist with slight, non-permanent changes in the condition of the encephalon, whether cellular, vascular, or electrical, they do not demonstrate that there are no grave lesions present in analogous states of insanity. Similar symptoms may arise from opposite pathological states.

To this objection four replies, at least, may be made.

*First*, we are not warranted in assigning more causes for the production of certain effects than those which are known to be sufficient to produce them. Delusions precisely similar to those of the insane can be induced in the sane, at will, under known conditions, and the accompanying changes in the brain, however open to question in regard to locality and minute anatomy, are of a *kind* respecting which there can be little difference of opinion. We are not at liberty, therefore, to suppose that the cerebral changes are different in *kind*, in ordinary insanity (with similar symptoms). Artificial insanity is of short duration, but it might be made chronic; that is to say, it would last as long as the subject was allowed or forced to remain in the condition induced by the operation.

*Secondly*, there can be no doubt that the most careful examination of the brain after death does, in a considerable number of cases, fail to discover any trace of disease, and in a still larger number only reveals such pathological changes as may be reasonably regarded as secondary, or as by no means peculiar to an insane brain. That no change of any kind, primary or secondary, should be found, always occasions disappointment, and, with some, surprise; but, if the leading idea of this article be admitted, why should we expect to find any change of a kind to be detected by the eye, whether with or without the aid of the microscope? It is justly remarked by Dr. Bucknill (whom no one will accuse of denying the necessity of material changes along with every functional perversion) that, "considering the vigorous and healthy activity of the mental functions most implicated in monomania, on all subjects outside the circle of delusive opinion—considering the unimpaired state of the bodily health, so frequent in these cases—and, lastly, considering the absence of pathological appearances in the brain after death, it is impossible to attribute the mental phenomena to active processes of disease existing in the cerebral organs." ('Manual,' 2nd edit., p. 435.) The facts of artificial insanity obviously assist in explaining and illustrating those cases of "chronic mental disease of a nature which leaves behind no pathological appearance" referred to by this writer (p. 439). I think they at once confirm and extend his explanation of their pathology. The anti-somatic school claims the absence of *post-mortem* change as a proof of the correctness of their position; but cellular, capillary, and even electrical changes, are

surely as physical as any other, although they may be so exquisitely delicate as to escape detection, or, indeed, disappear in death. An east wind may make a man profoundly melancholy, but the cerebral change are not appreciable by the best microscope, yet are they physical. Indeed, I should greatly regret if anything I have advanced, should lessen our faith in the doctrine of insanity being a disease of the body, and emphatically of the brain. But in the term "brain" we must include, not only its nervous tissue, but its electricity, the minutest capillary, the vaso-motor nerves, and the chemical character of the blood.

*Thirdly*, whatever force the objection may possess in regard to chronic insanity, it can scarcely be regarded as of weight when the attack is recent, and agrees, in the element of time, with artificial insanity.

*Fourthly*, and lastly, to my mind the most striking consideration which renders the objection forceless, and points out the identity of artificial and certain forms of ordinary insanity, is the sudden and unexpected recovery of patients labouring under mental disease, which is witnessed every now and then. To see a person who for long has been the victim of the wildest and apparently irradicable delusions, retire to rest as mad as ever and rise in the morning perfectly well, forcibly directs the mind to the conclusion that no profound structural lesion has been the cause of the mental affection; and I submit that such facts render it impossible to doubt that the *kind* of change which, from a consideration of the phenomena of artificial insanity, I have maintained *may* be, *is* actually present in at least some forms of insanity. When we see a sudden emotion\* cure an insane person, we may be allowed to conclude that no more tangible morbid condition attaches to the brain than that which must follow upon an attack of insanity occasioned by a similar cause.

Reverting, then, to my former proposition, I find nothing in the clinical observation of the insane to contravene, but much to confirm the conclusion, drawn from the interesting and suggestive facts of artificial insanity and somnambulism, that delusional (and some other) forms of insanity may arise from cerebral changes of a kind which are popularly called functional, and which, by whatever name we call them, have the important character of involving very slight alterations of structure, possibly almost as slight as, and similar in kind to, the physiological changes attendant upon every thought or emotion, or upon sleep, dreaming, and spontaneous somnambulism.

Such a conclusion, if thoroughly admitted into the mind of the practitioner, must, I think, sensibly affect his hopefulness as to

\* The old cure of throwing insane persons into a well is an illustration. Perfect, I think, records cures of this kind. I am not, however, advocating this way of acting upon the emotions!

recovery, and suggest the course, or perhaps rather the character, of the treatment most likely to prove successful in at least some cases of mental disease. For in regard to prognosis, I think an alienist physician is very likely to become hopeless, and not employ all the means at command, if he regards it as an indisputable fact, that serious structural lesions have taken place in the substance of the brain or its membranes; much more likely than if he bears in mind that alarming symptoms do not necessitate serious cerebral mischief.

As regards treatment, I think that the study of insanity from this point of view would, while by no means discouraging the use of physical agents, lead us to employ moral (or rather psychical) means systematically, philosophically, perseveringly. It were little more than a psychological truism to say that the primary indication would no doubt be to fix the attention in another channel than that in which it has become engaged, and to break the chain of automatic ideas which flow through the mind. But this, to be effectual, must be done *on system*. Mere desultory reading, for instance, however interesting, will not secure the object in view. Nor does travelling without somewhat of a definite aim meet the want. Books and travel, when employed, must be used with constant reference to the disordered condition of the Will and misdirected attention, and the necessity which exists of regulating the latter.

The importance of animating, arousing, corroborating the dormant Will, so long as it is directed rightly, that is, in antagonism to the automatic train of thought and emotion, is equally obvious, but equally requires systematically carrying out. Robinson Crusoe, when endeavouring to master his impulse to return to his island, generalised a little too much (as, perhaps, Mr. Barlow does in his well-known book), but he erred on the safe side. "After many cogitations," says he, "I struggled with the power of my imagination, reasoned myself out of it, as I believe people may always do in like cases, if they will; [very good, but how to get hold of the Will?] and, in a word, I conquered it . . . and particularly, as the most effectual method, I resolved to divert myself with other things, and to engage in some business that might effectually tie me up from any more excursions of this kind; for I found the thing return upon me chiefly when I was idle, had nothing to do, or anything of moment immediately before me."

Other indications might be pointed out of this general nature, but my present object is not to pursue them further, it being rather to confirm the view of the great importance of the systematic moral treatment of the insane, which is very generally entertained, but which is sometimes forgotten, or even almost doubted, in the recognition, now happily universal, of the physical nature of mental affections—a recognition which must not lead us to ignore the agency of in-

fluences brought to bear directly upon (what we call) the mind. Indeed, one of the most difficult yet important tasks of the psychological physician is rightly to estimate the relative importance of moral and physical treatment—not to exaggerate the one at the expense of the other—but to pursue a middle course between the two extremes of forgetfulness of the organ and forgetfulness of its function, always remembering the possibility of attacking the former through the latter.

Only by recognising the two elements—the psychical and the physical—fairly and fully, while denying, as we most consistently can, the action of the one without the other, shall we avoid the mischievous spiritual theories of Heinroth and Leuret on the one hand, and the purely pharmaceutical treatment of insanity on the other—a practice which rejects what, after all, is a great reality, by whatever name we may call it—moral treatment. Leuret, in his theory and practice, too much overlooked the necessity of gaining the implicit confidence of the patient *before* forcing his convictions. This, threatenings backed by the douche could never really effect. Nor, again, can anything be more hopeless than to attempt to cure the insane by reasoning with them—a course, the natural result of the fatal theory that an insane delusion is nothing more than an error, a mistaken judgment, a false doctrine, instead of being a disease, whether we choose to call it irregular action of the mind, a morbid habit of thought, abnormal evolution of ideas, or any other fancy name—a disease *which has destroyed the power* of believing otherwise, and substituted another *ego* for the dethroned one. And, in passing, I may point out how completely the facts of artificial insanity *prove* the absurdity of the *dicta* of the judges in regard to the test of criminal responsibility.

Reflection on the means by which the symptoms of artificially induced insanity are dispelled would seem to suggest the propriety of employing, not only the general means of cure to which I have adverted (and the importance of which is acknowledged by almost all, however imperfectly acted upon), but also the more direct agency of hypnotic therapeutics.

What are the means employed to remove the delusion by which the artificial monomaniac is bound? Two courses may be adopted—the first, that of rousing the subject by a sudden shock, as a loud noise, a current of air, or by irritating the nasal mucous membrane with powdered charcoal, and thus exciting the cerebral circulation and dormant Will, the method recommended by Dr. Philips in 1860; the second, that of substituting a healthy idea or sensation for the unhealthy one, by vocal suggestions. No doubt, useful hints may be obtained from the success of the former method, and I think it deserves consideration whether the latter might not be employed; but to make vocal suggestions available, it is clear that the medical

man who uses them must gain the confidence of the patient, and substitute his own will for the tyrannical dominant idea by which the patient is ruled, and gradually lead him to use his own. It is something to break a morbid train of thought, even for a few hours. The question is, whether the alienist physician might not, by Braidism, acquire such a command over the mind of his patient that he could exert a beneficial influence, both directly and indirectly, in infusing healthy ideas into his mind, which should overpower his delusions. If a theomaniac, constantly rapt in the ecstasy of devotion, can be made by vocal (or muscular) suggestions to dance, the fatal spell may have been broken.

It might be supposed that if, as I incline to think, the psychical condition of some insane patients is essentially the same as in artificial insanity, the suggestive treatment would prove successful without inducing a more decidedly hypnotic state of the system. But, I can understand how it may be necessary to adopt Mr. Braid's process, and thus for A to acquire power over B before he can avail himself of B's impressibility—an impressibility which, in the lunatic, is only in relation with one particular class of ideas, but which must be brought into relation with the physician's mind, and may then, not before, be played upon at will. At any rate, nothing can be lost by the careful trial, on an extensive scale, of the hypnotic plan of treatment, and large asylums for the insane present admirable opportunities for making such experiments and recording their results.\* Mr. Braid briefly but clearly refers to the subject in his works. He speaks of cases of monomania, more especially, in which the patients "pass into the second conscious state of hypnotism," and says he believes that the powerful suggestion of a new idea to them is a far more speedy method of cure than any other. He adds, from his experience, that monomaniacal patients are particularly susceptible to the influence of hypnotism. Incidentally, I may refer to an interesting case he mentions, not of insanity, but of a morbid condition of the olfactory sense, which well illustrates the effect of suggestion over false perceptions or sensations. A lady, æt. 40, stated to Mr. Braid that she had been tormented for four days with the most disgusting smell, in consequence of having visited a house in which a corpse was in a state of decomposition. Sal volatile, snuff, lucifer matches, had all failed to remove it. Having hypnotized her, Mr. Braid kept her mind *constantly dwelling upon the idea of fragrant odours*, by means of auricular and muscular suggestions. "I took care," he says, "to awake her with the mind actively engaged with these agreeable ideas, and the result was that the moment she was aroused from the sleep, she exclaimed with

\* [We shall be happy to record in this Journal 'Clinical Cases' treated by this method. Apart from their bearing on treatment, a clear report of the phenomena exhibited in each case would be of great psychological interest.—Eds.]

delight that she *now* enjoyed a smell as delightful as the former had been disgusting. From that moment this patient was never again annoyed with the disgusting odour, not even when, on several occasions, she attempted, by way of experiment, to recall it."

The same plan of treatment might have given relief in such a case as that recorded by Esquirol, of a lady who was tormented with the smell of the fumes of charcoal. She concluded that certain persons wished to poison her. She fled to her friends, but the same smell pursued her. The unhappy woman, dying of phthisis, was rendered miserable, by this hallucination, till her death.

Apart from what I would call the directly suggestive treatment, I would also direct attention to the power possessed by the practitioner of stimulating, during the hypnotic state, the functions of some of the bodily organs, either by directing the patient's thoughts to them or by a skilful manipulation of the muscles. Whether thought can alter the character of the blood has been doubted, but that it can affect the velocity of the circulation no one will dispute. That it or an emotion can determine the blood to one part, and even cause haemorrhage there, I have shown and illustrated by an example in the 'Manual of Psychological Medicine' (2nd edit., p. 173).

Mr. Braid conceived that the grand secret of his success in treating various affections by his method, lay in the control which he obtained over the circulation of the blood in a given part. "We have," he says, "an extraordinary power of acting on the capillaries, and of increasing and diminishing the force and frequency of the circulation, locally and generally" ('Hypnotism, or Neurypnology,' 1843, p. 72). He connected with this the concentration of nervous energy upon any particular function, and believed he could raise or depress mental or physical functions accordingly.

The importance of this agency in its action upon the ganglionic and cerebro-spinal systems is too obvious to require insisting upon. Mr. Braid availed himself of it in numerous affections—amenorrhœa, rheumatism, certain forms of deafness, blindness, &c. As he well points out, nervous disorders often quickly disappear on the accession of an acute attack of disease, and hence an intense excitement of the circulation induced *for a short time*, and then abruptly terminated, may change the former morbid action, and set up a new and healthy one. This view might seem merely a theoretic one, but I think no one can read the reports of this gentleman's cases,\*

\* Mr. Braid's works are out of print, but I am glad to find that his son Dr. Braid, of Weymouth, contemplates the collection and republication of them. In the mean time the references to the subject in Dr. Carpenter's 'Human Physiology' (fourth edition) are by far the best the reader can consult. In the preface to the last (the sixth) edition (in which these references are abridged) he expresses a hope that he may publish a separate Manual on the mind. In this he will, no doubt, work out still further the relations of artificial somnambulism and hypnotism, founded on his own experiments.

including what Dr. Carpenter calls his "important memoir" in the 'Edinburgh Monthly Journal' (July, 1853), without being convinced that the practice was a very successful one in his hands, and might be equally so in the hands of any one with equal patience and skill.

It is no part of the object of the present essay to enter upon the therapeutic influence of Braidism as a soporific or direct hypnotic; but, before passing from the subject of treatment, I am disposed to add that trial might be much oftener made of it, in nervous irritation and insomnia, than is the case. It is one very striking proof of the restorative character of the so-called neurotic or nervous sleep, that persons who have been allowed to remain for hours under its influence, sleep better and for a longer time, instead of the reverse, on the succeeding night. There is no reason why Drs. Demarquay and Giraud-Teulon's experience of the effects of artificial sleep in certain non-mental painful affections should not be as satisfactory in asylums for the insane. "In all these cases," they report, "it is a fact which has been verified whenever hypnotism has been induced, that very acute uterine pains which tormented these unfortunates day and night, and of which they complained bitterly, were checked and suspended during this particular state of their nervous system and long afterwards twenty hours of perfect comfort being the mean duration of the solace; and it was so real, so incontestable, so patent, that the patients demanded to be hypnotized immediately upon being visited. One young demoiselle, who suffered cruelly from neuralgic pains in the pelvis (the consequence of a violent contusion, with fracture), and which had not been relieved either by opium or by chloroform, used throughout an entire night, was calmed as by enchantment, and for a period of twenty hours, by hypnotism; and this two days in succession." ('Recherches sur l'Hypnotisme,' cited in the 'Psychological Journal,' October, 1860.)

M. Alfred de Maury observes that "animal magnetism" (by which he means no more than nervous sleep produced by *any* artificial way whatever, whether by acting on the attention by Braid's method, or by earnestly looking at the patient, or by monotonous passes)\* "is a means of imparting to the nervous system a tone which it needs, or of calming an over-excitement by which it is exhausted.

\* I think it is wiser, with Dr. Watson, to refer the beneficial influence of such manipulations to their *monotony* than to ignore it on the ground that an untenable theory has been connected with them. So long as the *rationale* is clearly understood and stated, and the practice freed from all unproved theory, it is a matter of secondary importance what means are employed to procure alleviation of pain or recovery. Nay, better cure by remedies, of the *rationale* of which we are ignorant, than not cure at all. The monotony system of treatment may, it is easy enough to understand, soothe an irritable brain and procure sleep upon the soundest physiological principles.

It has been employed by many medical men as a curative means in neuropathic affections, in which ordinary therapeutics have been unavailing. It has assuaged the excess of pain; it has induced sleep, ‘the sweet restorer,’ after prolonged crises; in some cases it has supplied the place of anaesthetics.” (*Journal of Mental Science*,’ 1861.)

In concluding this paper, I may observe that when the interest of the artificial phenomena to which it refers first struck me, some years ago, I was not aware that any writer had pointed out the analogy between them and the symptoms of insanity. Sir Henry Holland, Professor Laycock, and especially Dr. Carpenter, have, however, directed attention to the important bearing of these facts upon psychology. Still, I do not think that this has been sufficiently recognised. In conversation, lately, with a highly intelligent medical man, I happened to remark that artificial insanity, or so-called electro-biology, threw considerable light upon certain forms of mental disease. He was interested in the remark, and had not thought of the two classes of facts, as correlated, before. Subsequent observation, and a glance at the literature of insanity, have satisfied me that their relation has not been so much or so prominently dwelt upon as to leave a very distinct, or at least permanent, impression upon the reader. I have not met with any separate essay devoted to the consideration of the subject. The references to it, when they occur, are slight, and for the most part incidental; and, what is rather remarkable (and perhaps hardly creditable to our specialty), are chiefly to be found in a work not written by an alienist, namely, Dr. Carpenter’s ‘Human Physiology,’ 4th edit. Sir H. Holland observes, when speaking of hypnotism or artificial somnambulism, in his ‘Chapters on Mental Physiology’ (1852), that Mr. Braid’s “valuable experiments well deserve careful examination;” but I do not notice any detailed application by him of these experiments to the elucidation of morbid mental phenomena. His remarks, however, on the relation between sleep, dreaming, natural somnambulism, and insanity, are suggestive, and bear indirectly upon the subject of the present essay. Artificial somnambulism, however, offers decidedly more marked phenomena in regard to illusions, hallucinations, and delusions, than the foregoing spontaneous states do, and admits much more readily of experimentation.

It is certainly rather remarkable that in the *Journal of the Association* only one article has appeared on the subject of artificial somnambulism, and that this is a translation from a French writer (M. Alfred de Maury). In this excellent paper, the bearing of artificial somnambulism and artificial insanity upon mental pathology is only alluded to in very vague terms, although the import-

ance of the phenomena classed under the terms animal magnetism, somnambulism, Braidism, or hypnotism is enforced by the writer.

Again, in the 'Psychological Journal,' while there have been several articles describing the phenomena of hypnotism and so-called electro-biology, clearly pointing out their true nature, the importance of their bearing on insanity is incidentally and superficially alluded to, rather than prominently brought forward. The common etiology of hypnotism and some phases of mental disease is, however, referred to, and in one article it is remarked that one common cause of the two states—concentration of the attention—"will in the end, we think, be brought to bear as an important therapeutic agent." (July, 1852.) In another article, on "Sleep, Dreaming, and Insanity," by Dr. Laycock, it is observed that "recent investigations [alluding to hypnotism], conducted as well by enlightened physiologists as by ignorant empirics, tend to show that we may be able to acquire such a knowledge of the physiology of attention and of consciousness generally as to apply the knowledge easily, pleasantly, and safely to the treatment of cerebral disease, more particularly as manifested in the various forms of insanity and delirium." (July, 1851.)

An article in the same Journal, for October, 1860, entitled "Braidism," refers to the more recent interest felt on the subject in France, and closes with the observation that "Mr. Braid's researches opened out a wide and highly interesting field of experimental research, which doubtless admits of further and very profitable cultivation."

I fear, however, that this line of thought has, as yet, been but too little pursued or practically acted upon, and is in some danger of being lost sight of altogether. It is in the hope of preventing this that I have here brought forward the subject prominently, as one not to be incidentally referred to, or practised in a superficial, slovenly manner, but as one requiring and deserving careful study and patient trial.

To sum up the main points of this paper, I submit—

1. That while dreaming and natural somnambulism bear considerable resemblance to insanity; artificial somnambulism or Braidism, at a certain ideo-plastic stage, is still more analogous to, if not identical with, certain forms of mental disease, and therefore offers a better field for study than the former spontaneous conditions, and is more at our command for purposes of experiment.\*

2. That, in all probability, the disturbance of the brain which accompanies artificial insanity is the same *in kind* as occurs in some forms of mental disease, and does not involve structural change.

\* Of course the same rule holds good here as in drug experimentation—to be careful not to injure the experimentee.

3. That, bearing this in mind, the prognosis, in certain forms of insanity should, be more favorable than it often is.

4. That the mental condition which I infer to be present in certain forms of insanity, from a consideration of the mode in which artificial insanity may be induced and dispelled, forcibly shows the importance of the moral (or better, the psychical) treatment of the insane, and especially the necessity of acting systematically upon the attention.

5. That it is worthy of trial whether a directly suggestive mode of treatment might not be carried out, in some cases, with success the medical psychologist availing himself of Braidism to acquire sufficient control over the patient's mind to direct the current of his thoughts from morbid into healthy channels.

6, and lastly. That there is reason to think that, independently of the suggestive treatment, refreshing sleep might sometimes be procured, and restoration to health accelerated, by inducing artificial somnambulism or hypnotism.

### **CLINICAL CASES.**

*The Pathology of a Case of "General Paralysis."* By G. MACKENZIE BACON, M.D.; with a Report of the Microscopical Examination of the Brain, by SAMUEL WILKS, M.D. Lond., F.R.C.P., &c., &c.

THERE is so little satisfactory knowledge on this, the most frequent of the fatal diseases of the insane, that even a single accurate observation of the post-mortem appearances is worth recording. My object in bringing forward the following case is simply to illustrate the pathology of general paralysis (to adopt the familiar misnomer), for there is no peculiarity in the history of the patient, unless it be the length of the period during which the symptoms remained stationary. At the time of his admission, the man was said to have been ailing only a month, and this would give the case a duration of about four years.

Had it not been for the epileptiform seizure which proved fatal, there seemed every probability of his living another year. As soon after death as circumstances would allow, I removed the brain and spinal cord, and forwarded them to Dr. Wilks for exami-

nation, to whom I am indebted for a very careful investigation of the morbid appearances, as well as for a detailed account of the same. As all the interest of the case centres in the post-mortem, I subjoin Dr. Wilks' Report, without further comment, prefacing it with a brief outline of the history of the patient.

**HISTORY.**—William K., admitted February 25th, 1861.

At that time he was æt. 36, married, and a painter by trade. He was suffering from mania, the first attack, and ascribed to his wife having eloped with another man. It was stated in the medical certificate that he had gone into a fruiterer's shop, and in the presence of the owner had helped himself to oranges, and walked away, making no offer to pay, and having no money to do so with. The following notes were made of his condition on admission. "He is dull and heavy, with a puzzled look, and an evident difficulty in collecting his thoughts, although his replies to questions are correct. He has a hesitancy in speech. He is orderly and clean in his habits, and willing to be employed. His health is delicate, and he is suffering somewhat from the poison of lead, as he has a distinct blue line on the gums, although he has had no colic or lead paralysis." The advent of general palsy was soon diagnosed.

For nearly eighteen months he remained in much the same state as regards intelligence, though he became rather more feeble in his limbs. After this time he had a fall which seemed to shake him a good deal, and he became more forgetful and dull in mind. The dementia grew more complete, and for the last year of his life he was very incoherent, and feeble, and lost the proper control of his sphincters. He died after an attack of epileptiform convulsions, March 3rd, 1865, having had a similar seizure some twelve months previously.

**AUTOPSY.**—There was nothing remarkable in the condition of the viscera to notice. The following are the notes made by Dr. S. Wilks as to the appearances presented by the brain.

**DR. WILKS' REPORT.**

"The brain presented nothing more remarkable on its external aspect than the appearances usually seen where a certain degree of atrophy exists. The sulci were deep, as if an increased amount of fluid had existed on the surface, but which had now escaped, and the arachnoid was somewhat more opaque and thick than natural. The most remarkable appearance which the brain presented was due to the calcification of the minute blood-vessels. When a section was made through any part of the organ, owing to the knife failing to cut clean through the vessels, the latter were dragged out of the substance, and thus, instead of seeing the ordinary puncta vasculosa in the medullary substance, the blood-vessels hung out, and thus

gave a bristled appearance to the surface. On passing the knife over a second time, or on scraping the surface, the vessels were pulled still further out, and then it had almost the appearance of a hairy brush. The vessels could be felt to be hard and rigid by the touch, and when the forceps were applied, could be pulled out to the length of an inch or more together with their branches, and thus, when placed in water, the most minute subdivisions and radicles were visible, extending even to the capillaries. Indeed they could be extracted as well as if the substance of the brain had been carefully washed away, as is often done, so as to leave only the vascular system. These diseased vessels were more conspicuous in the medullary substance, but they were also found in the same condition in the cortex and in connection with the pia mater. The microscope showed all these vessels to be ossified or containing in their coats calcareous salts, even to their minutest divisions. The larger were irregular in shape and almost opaque when viewed

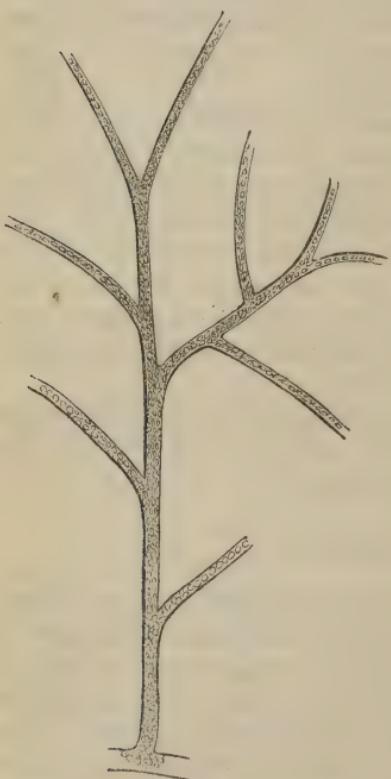
by the microscope. The smaller ones contained also earthy bodies in their coats, and their walls were irregular in shape and much thickened. The cineritious substance of the brain appeared to have undergone a great degeneration, for, instead of seeing only the natural fibres and ganglionic cells, it was full of granules and small, irregular-shaped bodies, not conglomerated, but at certain intervals apart. These were calcareous and not amyloid, for they were not rounded or oval like the latter, nor did they become of a purple colour by the addition of iodine. They were, on the other hand, irregular in outline, triangular, or with processes suggesting that they might be the ganglionic cells which had become wasted or calcified.

"The spinal cord was wasted, as a whole, but the vessels did not present that marked change seen in the brain. The medullary substance, however, showed similar

This fig. represents the appearance of the vessels as seen under a high power.

irregular-shaped bodies corresponding to the ganglionic cells.

"*Remarks.*—It will be seen that the blood-vessels did not present



exactly the same appearances described by Dr. Sankey, although the general change in the brain was much the same—that is, a degeneration of the brain, associated with a disease of the blood-vessels, the latter being probably the primary affection.

"In all probability an atrophy of the brain, associated with disease of the blood-vessels, occurs, under many circumstances and from many causes, as intemperance, syphilis, mercury, or lead-poisoning, &c.; but the peculiar form of disease found in general paralysis, would appear, from the researches of Sankey and others, to be due to a peculiar affection of the vessels. This case, then, so far corroborates the observation, for no accidental cause, as age, was present to give rise to this remarkable change in the blood-vessels. At the same time that Dr. Bacon sent me this specimen, I had an opportunity of examining the brain of a woman who had long been simply imbecile. The organ was wasted, but there was no marked change in the vessels."

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## PART II.—REVIEWS.

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1. *Manual of the Turkish Bath. Heat a Mode of Cure and a Source of Strength for Men and Animals.* From Writings of Mr. URQUHART. Edited by Sir JOHN FIFE, M.D., F.R.C.S., Senior Surgeon to the Newcastle Infirmary.—*London*, 1865. pp. 419.
2. *The Eastern or Turkish Bath: its History, Revival in Britain, and Application to the Purposes of Health.* By ERASMIUS WILSON, F.R.S.—*London*, 1861. pp. 167.
3. *Du Bain Turc, Modifié par l'Emploi du Calorique Rayonnant, et de son Introduction en Suisse.* Par L. A. GOSSE, Père, Docteur en Médecine.—*Genève*, 1865. pp. 151.
4. *A short description of the Thermæ Romano-Britannicæ; or the Roman Baths found in Italy, Britain, France, Switzerland, &c.* By ROBERT WOLLASTON, M.D. *London*, 1864.
5. *The Turkish Bath.* (Read before the Medical Society of London.) By DR. THUDICHUM.—*London*, 1861.

6. *The Anglo-Turkish Bath; with Practical Suggestions, and When it should be Employed.* By YORK JAMES MOORE, M.R.C.S., &c. —London, 1861. pp. 58.

It is as melancholy as it is strange, that the most important of our social customs are those which are most susceptible of being misunderstood in theory and misapplied in practice. One half the world, it has been remarked, is over-fed, and the other half under-fed. The misunderstanding of those comprised in the former section is gratuitous, the misapplication wilful. Those in the latter section cannot help themselves ; they would only be too glad to misunderstand and misapply. But the result of this undeniable fact evidences itself in an amount of suffering and disease which constitute an angry Nemesis. In the same way are misapprehended the principles, and perverted the application, of heat and cold in reference to the human economy. The entire subject of bathing is one about which European nations have little or no knowledge. But ignorance has not been bliss ; it is not, therefore, folly to become wise. The bath, in its most comprehensive sense, is not restricted to the process of ablution. There are land-rats as well as water-rats ; there are air-baths as well as water-baths.

Few of us, indeed, have known anything about air-baths, and most of us have got to learn that the one is the best, the only real preparation for the other. And why have we been so ignorant ? Because the traditional absurdities obtaining respecting water and its application to the human system, whether externally or internally, have been so many and so monstrous as to conceal the true end and purpose of legitimate bathing.

Let us inquire a little what these traditional absurdities are, and do what we can to effect their dispersion. Let the bath be henceforth known to us as a life-giving process, crowned with health and luxury.

Now, wishing in sober seriousness to point out to English men and women of the upper and middle classes what they are really doing to lay the foundations of disease in their young families, let us accompany them to one of our fashionable seaside watering-places. Hither come the young and delicate to drink in health from the breezes, and new life from the waters of the sea. Down to the bathing-machines day by day, in all weathers alike, under care of father or mother, or governess or nurse, troop these poor creatures, to be soused by some remorseless old mermaid draped in blue serge. The cruel and ignorant, but well-meant injunctions of parents are strictly complied with —each little bather being thoroughly cooled before he is subjected to that which will make him shiver for hours afterwards. In other words, instead of acquiring caloric wherewith to meet the depressing shock of cold water, he is made to part with as much caloric as

possible, because tradition has written with her iron fingers upon the nursery tablets, "Thou shalt not bathe when thou art hot." What is the result? See it immediately in the chattering teeth, the blanched cheeks and fingers, the numbed feet of the young bathers as they walk for hours afterwards upon the beach or esplanade—the strongest, perhaps, successfully, the weakest unsuccessfully—to restore the power of vigorous circulation. Every internal organ has been congested for varying periods, and the skin, which by a well-regulated bath should be brought into the highest play, has been shrivelled up into dry and functionless parchment. See the result afterwards, on the return home, in chlorotic looks, in constipated bowels, in susceptibility of cold, in general languor, in vitiated appetite, in scurfy and unsecreting skin. This is no exaggerated picture. This is actually and absolutely the bath of the great majority of the upper and middle classes during a few months every summer. Where the means and opportunities of getting to the seaside do not present themselves, the boys of each family observe in rivers and ponds the same rules, under the strictest parental injunction. And when some unlucky youth returns home shivering and complaining of pain and languor—when the seeds of his deadly sowing are beginning to crop up in pleurisy, or pneumonia, or peritonitis, he is reproached with not having followed the advice given him to *cool himself thoroughly before getting into the water*. Poor boy! he followed it too closely, and has thereby perilled his young life. Had he plunged into the stream "hissing hot" he would have treasured up for himself boundless health and vigour. We have witnessed this sort of thing over and over again in our younger days. It is only where the use of the Turkish bath is known that there is a chance of society being rescued from the perilous tradition to which we have first directed the attention of our readers. Dr. Leared appropriately alludes to this matter in the following terms:

"One remarkable change of opinion has resulted from the introduction of the Turkish bath. Not five years ago it was generally supposed that to pass while in a state of profuse perspiration into water the temperature of the air in winter must be injurious, or even highly dangerous. The dread of the contact of cold water to the heated skin was sometimes carried to a ludicrous extent. I well remember, when a schoolboy, having been taken to bathe with other boys, and, if heated by exercise, being compelled to wait in a state of semi-nudity until the point of regulation coolness was attained before entering the water. This refrigeration was, of course, the best possible foundation for bad results from bathing. It remained, however, for the Eastern bath to prove that the most profuse perspiration may be suddenly checked, not only without risk, but with positive advantage."\*

\* 'Manual,' pp. 276-7.

We are prepared to endorse this statement to the fullest extent. The vigour of the circulation and the heat of the body are the true measure of capacity for cold. The reaction from the shock of the sudden change is glowing and immediate, and, in a healthy skin, manifests itself in renewed transpiration. But there is no reaction to one who plunges into cold water with a cold skin. There is not sufficient caloric to meet the peremptory demand made upon the system by the contact of cold water, and consequently no sense of that luxurious enjoyment which can only result from a well-balanced and duly-sustained circulation. If any one wedded to the tradition of his nursery tablet will adopt our suggestion, and plunge into cold water when his skin is bedewed with perspiration, and when he feels himself (so to speak) brimful of heat, he will at once erase the long-cherished and ancestral record, and he will learn for the first time the true luxury of a bath.

The tradition which has tied generations in Europe to the necessity of an elaborate cooling process prior to the contact of individual humanity with external cold, has been accompanied by another which forbids the exhibition of cooling drinks when the system most needs them—in other words, when it is at the highest pressure of vital force.

“‘Oh! water—water!’—smiling Hate denies  
The victim’s prayer, for if he drinks he dies.”

And the leech left the burning thirst of the fevered Corsair unslaked. When does man most need water? When nature makes its most imperious demand: when she requires that the fluids eliminated by perspiration and other secretions shall be replaced. Here again, the thirst, which is in the ratio of heat, is the measure of the capacity for cold. Cooling drinks are for the hot and thirsty; heating drinks are for the cool and feeble. It is not to be denied that peculiar idiosyncracies are occasionally met with (usually of strange temperament and impaired health) which constitute an exception to this rule. Such persons cannot bear cold drinks which are not “qualified” with something of a stimulating nature, however heated may be their circulations. But we live so artificially, and stimulate the poor stomach so frequently with what Mr. Banting calls “nightcaps,” that the exceptions may be very frequent without invalidating the rule, which makes cold beverages most needed when the system is most heated by exercise or hot air.

These are the two great traditions of ignorance which have been religiously preserved to this generation, and which have stood between fully satisfactory and health-giving results from the ordinary water-bath in daily use amongst us. And yet, happily, with the advance of social science, and the increased supply of water by the great companies to all large towns in England, the passion for bathing has

greatly increased ; "baths and washhouses" are eminently successful. There are more clean skins (relatively clean), in the ratio of twenty-five to one, among the artisans of London than there used to be twenty years ago. This is a great move in the right direction. But more remains to be done yet. *The true bath of hot air, and then of water*, by which the skin is rendered *absolutely* clean, must become a great national institution. Before it our prejudices will fall, and our ignorance be dissipated. Our national life will be larger, our means of resisting climatic changes and repelling disease multiplied. We invite the rich and over-fed by telling them that in the land where the bath has alone been preserved the agony of gout is unknown.\* We invite the poor and the under-fed by telling them that heat is life ; that a porous and unscarfed skin is another lung in this smoky London ; and that the more oxygen they imbibe the greater will be their capacity for the pressing duties of manual labour.

The introduction of the Turkish bath into England has unquestionably been one of the greatest events of this century. As Admiral Rous says, "A new era has arisen." We need some modern Agrippa to second the efforts of Mr. Urquhart, and stud the town with these peerless temples of health and comfort. It is no easy matter, however, to make a practical assault upon the hereditary beliefs of a self-satisfied people, by proposing to them an institution which has only found its permanent home among a nation which Englishmen despise, at whose effeminacy they shrug their shoulders, and whose religious creed they regard with abhorrence—"Can any good thing come out of Nazareth?" Nor is it a light matter to overcome the prejudices of a profession the members of which regard themselves as the legally constituted guardians of public health. Dr. Thudichum must have felt the force of this when, five years ago, he read his able monograph on the Turkish bath before the Medical Society of London, and concluded in these words :

"There is now great danger that this incipient design of restoring the hot-air bath in this country may be frustrated through interested motives and empirical innovations, and through the dull or superficial writings of 'an insufferable race of stupid people,' who are loading the press with the absurd productions of their lame imagination and lamentable ignorance. To guard against all these, and to avert the loss of this great discovery, I, for my part, gentlemen, have now put before you what I think right, and what we should develop. A boon to mankind, your nation, and every individual in this room,

\* "Gout, a true blood-disease, is said to be unknown amongst the Turks; and this exemption is probably as much due to the free action of the skin caused by the bath as to their temperate habits. In estimating the value of the bath, however, as a curative agent, the special effect of caloric are to be taken largely into account. The effects of the higher degrees of heat possess a great, but as yet an almost unrecognised importance."—Dr. Leared, from the 'Lancet,' November and December, 1863. ['Manual,' pp. 259-60.]

hot air, combined with cold affusions, with shampooing, with exposure of the body to light and air, await your approval as medical agents, and your application to those who are under your care. I hope that you will seize the opportunity, and secure for this society a share in the merit, similar to that of which Hippocrates was proud, of having introduced the bath in the treatment of disease." (pp. 15, 16.)

To those who have no knowledge of the progress which the Turkish bath has made in this country, the following table of the relative number of bathers at the most important establishments in the kingdom will at once be interesting and surprising. It was compiled, towards the close of last year, by Mr. John Johnson, the able and intelligent manager of the Hammam in Jermyn Street, and embodied in a letter to Dr. Gosse, of Geneva, who was desirous of information upon the subject. Large as is this aggregate of 502,870, it must be remembered that it does not comprise the bathers at the smaller and less known public, nor those at the many private establishments in the kingdom.

*Aggregate Number of Bathers at the undermentioned Turkish Baths in England.*

| Description of Baths.           | How long Established.     | No. of Bathers. |
|---------------------------------|---------------------------|-----------------|
| The Hammam, 76, Jermyn Street   | 2½ years                  | 72,000          |
| Golden Square                   | In 5 months after opening | 6,000           |
| Oriental Baths, Victoria Street | 2½ years                  | 54,720          |
| Liverpool                       | 2½ "                      | 7,875           |
| Bradford                        | 1 year                    | 15,600          |
| Sheffield                       | 2 years                   | 41,600          |
| Stockport                       | 1 year                    | 7,875           |
| Manchester                      | 6 years                   | 37,400          |
| Ditto                           | 6 "                       | 24,960          |
| Staleybridge                    | 6 "                       | 24,960          |
| Newcastle Infirmary             | 5 "                       | 23,440          |
| Queen's Square                  | 4 "                       | 37,440          |
| Kennington                      | 4 "                       | 41,600          |
| Brompton                        | 3 "                       | 23,400          |
| Southport                       | 2 "                       | 20,000          |
| Keighley                        | 6½ "                      | 60,000          |
| Leamington                      | 1 year                    | 4,000           |
|                                 | Total                     | 502,870         |

The Turkish bath, then, is receiving a fair trial at the hands of our countrymen, and will eventually, we hope, become a recognised sanatory institution in every town and hospital. The literature of the subject has been tolerably prolific, and has at last culminated in the production of Mr. Urquhart's long-expected 'Manual.' If we do not exactly like the form of the work, and are not prepared to endorse all the crude physiology of our Eastern traveller, we are bound to express our gratitude to him for his arduous labours in

the cause of science, and for the production of a book which cannot fail to be read with great interest. Mr. Urquhart is fortunate in having so able and zealous a lieutenant as Sir John Fife, whose practical experience of the bath has probably been greater than that of any other man in England.

It is curious that the application of caloric to the human system by means of the hot-air bath was neither used by the Romans or the Turks as an agency in the treatment of disease. It was simply a luxury, felt to be a necessity of being, and so universally resorted to that sickness was comparatively unknown. If its effect was in any sense curative, that effect was produced unconsciously. "For the first time now, and in consequence of what has been done in England, the bath is dealt with in Turkey as a medical agent, as appears by a series of articles which has appeared in the 'Turkish Medical Gazette,'" \* And this is probably due to the circumstance that the bath is gradually falling into disuse among the subjects of the Sultan. The bath ceasing to be a national custom, disease is becoming more a national visitation.

It is worthy of observation, as indicating how clearly the use of heat has been an instinct, that the hot-air bath is not known in regions where the temperature is so high as not to make it necessary. In other words, the ordinary atmospheric condition is a perpetual hot-air bath in the torrid zone, and the skin is exposed to the healthy influence of light and heat. The common belief that the Turkish bath is of Eastern origin is, like most popular beliefs, a fallacy. It was introduced into Arabia from Greece, and Mahomet strove to put it down as effeminate and impure. He coupled it (says Mr. Urquhart) with the graveyard, saying, "In these two I have no part." But in Western countries, where the body has been artificially covered up, the bath appears to have been almost universally a primæval institution :

"The whole of the North of Europe possesses it in one shape or another. The Red Indians of America have it; the Swedes have it; the Russians have it; the Fins have it; the Tartars, the Persians have it; the Celtic races possess the remnants of it in the Irish 'sweating-houses'; † the Gothic races originally had it too.

\* 'Manual,' p. 3.

† The following is an account given of the "sweating-houses" by an old game-keeper :—"In the county of Fermanagh I could take you to ten or a dozen of them. They are built in the form of a bee-hive; turf is burnt on the floor till it is clear, then they close up the hole and leave it for a time. When you are going to take the heat, the turf ashes are swept out, and the floor covered with rushes. You go in, and get towels and wipe the sweat off, and so on, till it is time to come out. Some knowledgeable body is there that tells you when to come out, and you then jump into a stream of water; or if there is no natural stream, water is led, and a hole made for it. There was a man there, a strong (rich) farmer, and he built one for himself, and brought water through it in pipes. These houses were first made by the ancient Milesians, long before your bath was thought of."— 'Manual,' p. 403.

But when you come down to the South it is no longer to be found."

The use of the bath, however, died out among the nations of the West. Greece now knows it not; when the Romans began to decline they too lost it, although Agrippa alone had built more than one hundred and fifty bath-houses in the capital, and there was once no Roman camp without abundant provision for the daily bathing of the soldiers in garrison. Mr. Urquhart is of opinion that the bath is now dying out in Turkey, where it has been preserved in sloppy impurity until the present day. Shall it find a permanent home, under more improved conditions, in a seagirt island where the Romans themselves have left so many monuments of their greatness, where the climate is as variable (though not more so) as that of Turkey, where the inhabitants are prone alike to the diseases of luxurious indolence and grinding poverty?

Now let us inquire what are the great purposes to which the bath is subservient, and what are likely to be its effects when permanently established and generally utilized amongst us.

In the first place, the bath, properly understood, and used with the precaution arising from its being understood, is one of the best preservatives against disease. It anticipates evil. "Comme agent préventif, je ne crois pas qu'aucun autre puisse égaler le bain turc judicieusement dirigé."\* And in this crowding, pressing, business-like age of ours, when men will not find time for exercise, save at uncertain periods; when day by day are accumulated from excessive good living the poisons which afterwards manifest themselves in dyspepsia and gout, it is hardly possible to over estimate the value of a process by which alone man is taught the true "dignity of the skin." Look at the shoals of "City men" who pour into London every morning by rail and omnibus and steamer, and leave again in the evening, utterly worn by the fatigues of the day. What is their daily round? Out of bed early, of necessity, though tired and sleepy; a cold sponge-bath—capital in its way, but not a true bath; meat breakfast—rush to rail or omnibus—whirl up to Babylon; letters to write, business of various kinds to transact. Between one and two o'clock a sense of exhaustion, met by a hot lunch—in many cases a real and heavy dinner, with ale and stout, two or three glasses of sherry, and then again to business. At five or six o'clock there is a great exodus. Back again to their country residences go our mercantile community; many arms are opened to embrace the well-fed citizens, and many choice dishes (a second dinner) tempt them to an indulgence of a most prejudicial kind. Perhaps on a Saturday our younger friends get a row on the river or a game at cricket—the elder ones a stroll with their wives and

\* 'Du Bain Turc,' p. 67.

children. Our citizens grow fat and flourishing, but they are laying up for themselves the seeds of disease. There has been no real outlet; there has been no real elimination from a system unduly plied with stimulants and with food. If some discreet person suggests a Turkish bath, the answer may be, "Oh! I've no time; or, "Baths don't suit me—I get enough taken out of me in the City;" or, "I'm afraid of catching cold;" or, "I'm subject to rushes of blood to the head;" or, "Disease of the heart is in my family;" and excuses of a similar nature.

Now set aside your prejudices and give the bath a fair trial. If not a new man after the first, you shall at least be so after your second and third. Your skin will be brought into action in a manner which will astound you; and those who have analysed the sweat of first bathers will tell you how much more charged it is with impurity than that which exudes from the pores of a well-educated dermal surface.\* Your body will be "ventilated" for the first time in life; its millions of pores shall stand with open doors and oxygenate all your frame; and when the process has been completed by shampooing and the cold plunge, you will experience what D'Ohsson happily phrases thus: "Un calme et un bien-être difficiles à exprimer—une sorte de régénération, dont le charme est encore augmenté par des boissons restaurantes, et surtout par un café exquis."

It is worth while here to consider the nature of the objections raised to the Turkish bath, because the fact of their not being properly met constitutes a grave stumbling-block with many persons who would otherwise be too glad to find themselves pronounced fit subjects for its enjoyment.

Stout, flesh-making persons (under which category come many of our City friends) are wont to say, "I am afraid of a rush of blood to the head." There is no evidence to show that such a result is produced by hot air. We have laid ourselves out to make inquiries upon this point, and we are persuaded that, beyond a sense of fulness on the first occasion of bathing, and on resorting to too high a temperature, there is nothing to establish the correctness of this objection. Once, and once only, we saw an elderly obese gentleman become flushed in the face. He complained of slight headache, and his nose began to bleed. But he was subject to bleeding of the nose when *not* in the Turkish bath, as also to a pain in the head. Congestion of the brain is much more likely to occur when the skin is cold and its pores closed than when it is tingling

\* "In a chemical analysis of the perspiration of a group of bathers, recently made, that fluid was found loaded with saline and organic matter in the recruits, but was almost pure in the veteran bather: his blood was washed as clean as that of the working man who eats the bread of labour—that sweetest of all bread, the bread that has been earned with the sweat of his brow."—"The Eastern or Turkish Bath," by E. Wilson, F.R.S., p. 57.

with vigorous circulation and exuding streams from its surface.\* The relief to the system by the loss of fluid is highly beneficial in its action to those overcharged with adipose tissue. Mr. Urquhart triumphantly quotes Mr. Banting, the "type of obesity," and the furnisher of jokes to our pantomimes, who says, "The restoration of the bath is the greatest blessing which has fallen upon man for the last thousand years." We give the following extract from one of the dialogues between Mr. Urquhart and his friends :

"*Mr. Rolland*.—Since I have had a bath of my own, taking it daily, I have not increased my usual amount of exercise, nor altered my diet, and yet I am four inches less in girth; my weight has been brought down from 14 stone to 12 stone 7 lbs. But in regard to the use of dumb-bells, to fencing, and tennis-playing, there is not the slightest comparison as to what I can perform before and after I have had the bath.

"*Dr. Thudichum*.—Let any one go to the baths, and ask questions there. He will find dozens of persons attending them for the very purpose of reducing their obesity. Thirty-six pounds is the highest I have heard of from the person who has experienced it. But if a man goes to the bath, and feeds like a pig all the time, it is quite clear that that person will increase in fat. Therefore if a person will live properly, there is no doubt that the bath will increase the fibre and decrease the dead matter which we call fat.

"*Dr. Leared*.—I had in mind the popular notion that the fatness of the Turk is due to the bath.

"*Mr. Urquhart*.—The assumption that the Turks are fat is as groundless as that their climate is dry. The safe rule in all such cases is to take the contrary of a popular notion."†

And Mr. Urquhart says elsewhere that the Turkish women, taking little or no exercise, would undoubtedly become fat if it were not for the depurating process of the bath.

Another favorite objection taken to the bath is the fear of catching cold after leaving it. This happens to be just what no one ever does. The bath is the best preservative against vicissitudes of temperature. It imparts a vigour and a power to resist cold, which are as remarkable as they are undoubted. Ask the *habitues* of the bath whether they ever catch cold; ask the shampooers the same question, and learn from them also that they have no occasion to clothe

\* A patient thus writes:—"To corroborate my former statement as to the efficacy of the Turkish bath as a remedy for fulness of blood in the head, from which many middle-aged persons of the learned professions are apt to suffer, I am still in the habit of taking a bath twice a week, to ensure a cool forehead. I am aware that an erroneous impression exists about the Turkish bath causing rushing of blood to the head and eyes, whereas my experience is that the warmth of the bath causes an even circulation—a circulation which is felt even before the heaviness affecting head and eyes begins to go off."

† 'Manual,' p. 80.

themselves so much as those who have coverings which are so neglected by their possessors as to be unworthy of the name of skins. Again, "It is a common experience (says Dr. Thudichum), that persons liable every winter to attacks of catarrh, bronchitis, or neuralgia, acquire a perfect immunity from these complaints."

Again : The alarm of those who have actually organic disease of the heart, or, at all events, an hereditary tendency thereto, is natural, and such as to excite our sympathy. There is an umistakable dread of the hot-air bath under these circumstances, arising from a fear of undue stimulation of the circulatory system. But it is remarkable that the very contrary effect is produced in these unfortunate cases—the bath tranquillises and subdues.

"I find," says Mr. Urquhart, "that in the bath, persons suffering from disease of the heart obtain instant relief, although the number of pulsations is increased. It is just as in the case of a steam-engine going down an inclined plane; the piston works more rapidly because the work is done for it. The skin comes to the aid of the heart and lungs."\*

Dr. Goolden, of St. Thomas's Hospital, has been greatly struck with the influence of the hot room in quieting the circulation, in some cases of palpitation of the heart. Dr. Thudichum has noticed and recorded the same fact.

There is also a large class of persons who object to the use of the bath on the supposition that it is exhausting. "We are already sufficiently feeble and exhausted; we do not want any further reduction of vital force." But the bath is not exhausting, because its salutary influence is not measured by its power to produce abundant sweating. Mr. Erasmus Wilson says that one of the most remarkable properties of the bath is its ability to destroy the sense of fatigue and exhaustion: and our own experience fully confirms this statement. Such a supposition can only have arisen from an entirely mistaken view of the nature and character of the bath. "Talk to a working-man," says Mr. Urquhart, "about perspiration being 'lowering,' he will laugh in your face." It does, indeed, produce "purgation by the skin," in obese and hydræmic subjects, and, occasionally a temporary sense of exhaustion, but in spare, nervous, and delicate subjects its effect is altogether of a different kind. There is little sensible loss of matter, but an invigoration arising from the contact of the now unscarfed skin with particles of caloric, and from the newly acquired power of drinking in oxygen through channels previously choked up. Mr. Moore thus writes of his experience :

"I would record my own especial obligation to the bath on various occasions. I have frequently resorted to it, with immediate

\* 'Manual,' p. 16.

relief, when suffering temporarily from some of the minor evils which 'flesh is heir to ;' and *after excessive fatigue, mentally or bodily, I have invariably found the most soothing and refreshing effect from its use.* I ascribe to the frequent application of heat, in the form either of hot air or vapour, immense relief from a very depressed condition of health to which I was reduced by long-continued neuralgic and rheumatic pains, associated with deranged liver."\*

"It is a grave error to call the bath a process of sudorification, because in this term the other effects of the bath are lost, the most important among them being the caloric stimulation of the sympathetic system."†

Having thus pointed out how the Turkish bath is a polished luxury of civilised life, a cleanser of the skin, a depurator of the blood ; how it imparts a healthy stimulus to the exhausted, and a sense of salutary unloading to the plethoric and obese ; how, in short, it is in these varied aspects a true preservative, we proceed to consider what it is capable of effecting in those abnormal conditions which constitute disease.

The question of disease of the heart seemed to be so inseparable from that of sensations of temporary irregularity of circulation, where no real disease exists, that we have already alluded to these two conditions conjointly, and shown what is the general opinion of those who have had experience of the bath in its application to derangements of every kind. We may here, however, add one important statement by Dr. Thudichum :

"A similar case of dropsy from heart disease, with a pulse of 170, almost moribund, has come under my notice. The patient was kept in the bath one day and one night ; afterwards at intervals ; within a week his pulse had become slow, averaging 75, and the patient was able to walk about the garden. Two cases of palpitation of the heart, unaccompanied by valvular disease, have come under my observation, in which a low temperature of the bath mitigated the palpitation, but a higher one removed it ; so that while rapidity of motion remained, the inconvenience and mental uneasiness were removed. The weight seemed to be taken off. With this experience I am glad to find the records of the Newcastle Infirmary fully agree. They state that the *extreme heat* exerts less influence on the heart and circulation than the ordinary warm-water bath. In some cases in which the pulse and stethoscope gave unmistakable evidence of heart disease, the patients have undergone the process *without attendant mischief*, and with *unlooked-for benefit*."‡

Closely allied to disease of the heart is disease of the lungs, comprising that fearful malady consumption. Now, whatever doubts may

\* 'The Anglo-Turkish Bath,' p. 53.

† Dr. Thudichum's paper, p. 8.

‡ Op. cit. p. 14.

exist as to the power of the bath to *cure* consumption in an advanced stage, or even to arrest its progress, there is good reason to suppose that much benefit may be derived from its judicious application in the earlier phases of the disease, and in all subjects gifted with the terrible inheritance of phthisical proclivity. And this property must be—

“Based (as Mr. Erasmus Wilson expresses it) upon its (the bath's) powers of altering the chemical and electrical conditions of the organic structures of the body, and abstracting its fluids. The whole of these changes take place simultaneously, and, no doubt, harmoniously; but, in certain instances, we may rely upon a greater activity of one of those processes over the other two; for example, in neuralgia, the electrical power should preponderate; in the destruction of miasma and poisonous ferments, the chemical power; and in the slow removal of accumulated morbid deposits, the fluid-abstracting power.”\*

In an able paper read before the Harveian Society, Dr. Toulmin pointed out the importance of the functions of the skin in the pathology and treatment of tubercular consumption. By eliminating poisons through its pores we restore its respiratory action, and so enable it to assist the lungs in their important functions. It may be answered by some objectors that in the later stages of phthisis profuse sweating is one of the dreadful symptoms which we have to combat. But Dr. Leared distinctly states:

“The direct action of the bath has been more strongly shown in removing night-sweats than in any other symptom. In several other cases I have recommended the hot-air bath for this distressing symptom. A patient, who had been drenched by night perspiration, told me recently, that after having taken a bath which I advised for him, he had no return of them, and several days had then elapsed.”†

It is also stated by the same physician that the presence of haemoptysis does not contraindicate the use of the bath, for he has seen patients benefited thereby. In his monograph on the Anglo-Turkish bath Mr. Moore says:

“It may be, comparatively, but very small aid the skin can afford the lungs in conditions of disease, but surely that little must be all-important at such a time, especially when we remember how wonderfully Nature will for a time encourage her requirements, and how, if an organ is temporarily, only partially relieved from its work when inadequate to the performance of its full function, it will often recover its vigour. Cod-liver oil is, doubtless, a most valuable remedy in tubercular disease; and it is efficacious in proportion to the capacity of the lungs to permit of the absorption of oxygen from the

\* Op. cit. p. 142.

† ‘Manual,’ p. 275.

atmosphere, to secure the chemical changes resulting in animal heat. Hence it follows, of what moment it is if any organ can be brought in a condition *to assist* in this important work ; and, as has been shown, this may be considerably effected, by stimulating the skin to its respiratory functions. If, then, in the early stages of phthisis the skin can be employed *in any degree* to relieve the lungs in the manner described, it must be highly important that it should be put in the best possible condition to fulfil its requirements, and be stimulated to the healthy exercise of its functions. To effect this the Anglo-Turkish bath is certainly the most powerful, if not the only, means. In this brief consideration of the bath, with reference to pulmonary disease, its important eliminative and derivative properties must be remembered, as ridding the system from the effete and deleterious substances, as well as its other physiological operations.” (pp. 43-4.)

By the ‘Report of the Newcastle-on-Tyne Infirmary for 1860,’ it appears that the distressing night perspirations of phthisis were checked by the hot-air bath, followed by cold affusions, and that the chronic bronchial affections of old people were greatly benefited.

From what has been already advanced, it will be easily understood how beneficial must be the action of the hot-air bath in those dropsical effusions which are the result either of diseased heart or kidneys. In every case of this kind the excreting power of the skin is reduced to a minimum, and carbonic acid and urea accumulate in the blood. That which most powerfully eliminates and derives, and restores the equipoise between solids and fluids, is obviously the most needed remedy. There is no other instrument known to modern science which can compare with the bath for effecting these results. Drs. Goolden, Thudichum, Leared, Wollaston, Lockhart Robertson, Sir John Fife, Messrs. Erasmus Wilson and Moore, with many others, are unanimous on this point, and have placed on record remarkable illustrative cases. Dr. Lockhart Robertson, the medical superintendent of the Sussex County Asylum, in a letter to Mr. Urquhart says :

“ When you were at Hayward’s Heath the other day I showed you a patient, M. W—, who was admitted here on the 23rd of February, 1863, apparently in a state of confirmed dementia, unable even to tell his name ; restless and destructive. He was much reduced in health, and there was dropsy of the lower limbs, with albuminous urine of a marked character. The patient gradually got worse, and after he had been a month in the asylum I sent him to the bath almost as a forlorn hope. The result of a month’s treatment of the bath, twice a week, was that the dropsy disappeared, that no trace of albumen is now to be found in the urine, and that the man is apparently convalescent. You will remember seeing him here at his work as a carpenter.”\*

\* ‘Manual,’ pp. 350—1.

And since this is the record of an accomplished physician to an asylum for the insane, we may here at once allude to the beneficial effects which are likely to accrue, and have already accrued, from thermal agency in the treatment of mental disease. Ireland was that part of the United Kingdom where the bath first found a home through the instrumentality of Mr. Urquhart and Dr. Barter; where it has been received with less disfavour and prejudice than in England, and where its results in the treatment of insanity are best known. It has been introduced with marked success in many of the Irish county asylums. Dr. Power, the resident physician to the Cork Asylum, was good enough to show us his Turkish bath two years ago, and communicated to us his great satisfaction at the results which he had hitherto achieved through his agency. In England, at Colney-hatch Asylum, and several others, baths are now in process of construction. Dr. Robertson's experience at Hayward's-heath is so satisfactory that we hope, in a few years, no county asylum will be without the opportunity of confirming his important evidence. The functional disturbances which are leagued so extensively with insanity, the imperfect nutrition of the brain, and, above all, the peculiar condition of the skin, invite the action of the hot-air bath, on reasonable grounds, with abundant promise of success. Dr. Robertson alludes to the latter symptom as one specially met by the application of the bath, which has "a specific power to remove the noxious secretion of the skin, so frequent with the insane, and which, in the asylums of twenty years ago, one could recognise as distinctly as the smell of a dog-kennel, and which still sometimes refuses to yield to ordinary ablution." The bath entirely removes this unpleasant complication. This peculiar foetor would seem to be owing, according to Dr. Thudichum, to a crystalline deposit round the mouth of the sweat glands, which becomes decomposed, producing carbonate of ammonia, in combination with volatile acid; and he says that healthy fresh sweat from a clear skin has a most agreeable odour, or none at all.

It need scarcely be said that an agent which has so special an influence on the skin must be calculated to afford special relief to the various diseases of that important tissue. Whether the multiplicity of these diseases is owing to the new function given to the skin by Mr. Urquhart, who says that by it, and not by our stomachs, we digest our dinners, we do not pretend to determine. It is a problem much too elaborate for our apprehension, and we commend it to the consideration of Mr. Erasmus Wilson. This gentleman, however, is in a position to furnish us with much evidence on the application of the bath in the affections which he has made his specialty; and his testimony, together with that of other observers, is to the effect that it is a very powerful auxiliary in chronic affections of the skin. "I have known eczema removed," says Dr. Thudichum,

"in two baths. A list of skin-diseases are already known, which yield to the bath as intermittent fever does to quinine."

For cancer, also, the bath has been vaunted as a cure. If there is a disease of which we know nothing, and against the ravages of which we can do nothing, it is that sad inheritance which seems to encroach alike upon the domain of skin and gland, and involve, indeed, every tissue in its insidious march. We do not think there is any evidence to show that the bath can help us here. There has as yet, indeed, been no sufficient opportunity of experiment. Whatever it may ultimately become, the bath is not yet an universal panacea, and we think injury is done to the cause of its advancement by attempting to associate it, upon insufficient testimony, with a disease which seems to be almost the exclusive property of the charlatan and quack. It is worthy of observation, however, that (according to Mr. Urquhart) "cancer is unknown in countries where the bath is in use, as also in countries where, the bath being unknown, the temperature is such that excretion by perspiration is active." It is right, also, to add to this statement the remarkable circumstance noticed by Dr. Thudichum in the following passage :

"Cancer offers some remarkable features. I found cancer-juice to be full of chloride of sodium. The bodies of cancerous persons contain an excess of this salt. Whatever the relation, cancer and excess of salt coincide. Is the kidney unable to rid itself of salt because the skin retains its portion ? Is cancer of the stomach so common because this organ, surrounded in and outside with chloride, cannot escape its irritating influence ? The cancerous tumour offers features only found in vegetables ; alone of all tissues it drains a juice when heated. Here are questions pregnant with results when investigated. Under any circumstances, the bath will remove conditions accompanying, favouring, or perhaps producing that awful disease, cancer. The bath will rid the body of excess of chloride of sodium in the tissues."\*

It may, perhaps, be inferred (as Mr. Urquhart suggests) that cancer owes its origin, like its cognates, scrofula and tubercular phthisis, to the habits of modern Europe ; "that is to say, to the inclosing of the body in warm and close-fitting vestments, to the exclusion of air from the apartments, to the over-supply of food, and to the frequency of the efforts called for from the stomach for the purpose of digestion."

We pass from this painful and distressing malady to one of an equally intractable character, and which, when associated with mania, Esquirol called "le désespoir des Médecins." We do not expect any good results from the use of the Turkish bath in epilepsy ; and we think it of importance that those who are the unhappy subjects

\* Op. cit. pp. 10—11.

of it should avoid, both for the sake of themselves and others, entering public establishments. If they bathe let them do it privately, and yet attended. We are led to this remark by the circumstance that several epileptics have had their characteristic seizures when at the Hammam in Jermyn Street. A sudden fall on the marble slab might produce fracture of the skull and be fatal to themselves ; and an epileptic fit is at all times very alarming to the general community. It is most unfair to other bathers, and most unjust towards the proprietor of a bath, that epileptics should bathe in public. The uninitiated, on seeing a fit, naturally enough attribute it to the effects of the bath, and thus a grave wrong is done to many. The bath is as yet on its trial in this country, and it is entitled to that fair and generous consideration which we accord to every other foreigner who seeks a refuge on these shores.

It is unfortunate that, as yet, so small a proportion of bathers in England are females, for there is evidence to show that in a very large class of diseases, to which women only are obnoxious, the effects of hot air are most satisfactory and successful. We pointed out, at the commencement of this article, how much injury is done to young girls by sea-bathing in the popular mode. Uterine and general visceral congestion, with blanched surface and feeble circulation, are the sequels of a fashionable custom, which, as at present carried out, has no single recommendation. The hot-air bath, followed by cold affusion, would produce results the very opposite of those effected at our fashionable watering-places. The pallid features of chlorosis and amenorrhœa would merge into the roseate hues of health ; the languor and lassitude, so characteristic of functional derangement of the uterus, would yield to an energy and a force worthy of Diana Vernon and an age of "muscular Christianity." "I have employed it (the bath) in cases of amenorrhœa and chlorosis with marked benefit," is the evidence of Mr. Moore.\* Dr. Lockhart Robertson, in a letter to Mr. Urquhart, says :

"In irregularity of the uterine functions, which in young girls is sometimes complicated with mania, I have found in several instances a cure follow the restoration, through the agency of the bath, of the healthy uterine action. Setting the mental symptoms aside, I would here say, that if the bath had only this one remedial power of restoring suppressed menstruation, its value in restoring the ills resulting from our high civilization would still be great. I have within the last two months discharged two young girls cured, who for many months suffered from maniacal symptoms, connected with irregular menstrual action."†

We should like to see a thermal establishment attached to every

\* Op. cit. p. 53.

† 'Manual,' p. 350.

large "seminary for young ladies," and to make it a penal offence for governesses to give (as is so commonly done) blue pill and drastic purgatives to their pupils. The constipation, the vitiated appetite, and even the uterine disturbance itself, so often met with in young girls after they have left school, are frequently the result of this pernicious habit, for which a fitting substitute would be found in the well-regulated application of caloric to the human frame.

It would appear from general testimony that zymotic diseases yield speedily to the treatment of the bath. A high temperature seems to have the power of destroying the germinating property of the poisons which so prostrate and subdue. "It is pre-eminent, and supersedes all other means of cure." "Heat must beat cold," said the late Lord Dundonald to Mr. Urquhart, who was a sufferer from ague on board the noble lord's steam-yacht. With these words he carried him to the stoke-hole and stopped the fit, and cured one of the first Europeans of this complaint by heat. This experience has borne wonderful fruit in the Newcastle Infirmary. "In regard to ague," says the house-surgeon, "I have several times witnessed the aversion of its paroxysms by placing the patient in the bath prior to the onset of the rigor. By this means alone the essential features of the disease have been removed, and quinine has been used as an ordinary tonic for the remaining debility." Dr. Gosse, of Geneva, also received at the hands of Lord Dundonald (then Lord Cochrane) the same treatment as Mr. Urquhart, and records it in the following terms :

"Les cas de fièvres intermittentes traités avec succès par l'étuve sèche ne sont pas rares, et l'application en a été faite pour couper court à la période algide. Moi-même, j'en avais déjà fait l'expérience en Grèce. Ayant réchappé miraculeusement à Poros à deux accès d'une fièvre pernicieuse rémittente et contagieuse, je parcourais les îles de l'Archipel, lorsque je fus rappelé à Nauplie par l'Amiral Cochrane qui s'y rendait sur un petit yacht à vapeur. Étant à son bord vers le soir, l'air frais du golfe et les miasmes des marais de Lerne, réveillèrent une attaque violente de fièvre algide, qui pouvait faire craindre une issue fatale. Lord Cochrane eut la bonté de me prendre dans ses bras et de me transporter dans la soute du bâtiment, auprès du foyer ardent de la chaudière à vapeur, me frotta, me massa, et me fit transpirer abondamment. Les accidents disparurent comme par enchantement. Dès le lendemain je pouvais vaquer à mes occupations et faire usage de la quinine comme pré-servatif. M. Urquhart, qui se trouva plus tard atteint d'une fièvre d'accès à bord du yacht, fut traité et soulagé de la même manière que moi, par l'excellent amiral."\*

If a remedy will meet the demands made upon it by the subjects

\* 'Du Bain Turc,' p. 58.

of gout and rheumatism, what a large class of votaries will it not secure ! These are the last special diseases to which we purpose drawing the attention of our readers in connection with the thermal application of caloric. And they seem to us to be the most important, because even the worst cases are susceptible of temporary relief and immediate comfort, if not of permanent cure.

"Diseases of joints, particularly the gouty forms, are cured and mitigated," says Dr. Thudichum. "Gout on the whole exhibits a yielding tendency. A temperature of from 160° to 175° acts as a complete anaesthetic to the local pain of the paroxysm ; but it also removes the primary cause of gout by favouring the re-absorption of deposited urates, and their combination with oxygen, by which they cease to be injurious to the frame. Oxalic acid, a prominent product of this oxygenation, has been found in the sweat of gouty persons."\*

The house-surgeon to the Newcastle-on-Tyne Infirmary bears most emphatic testimony to the benefit derivable from the bath in the treatment of acute and chronic rheumatism ; "since cases that would have been perhaps confined to bed for weeks, under ordinary treatment, were enabled to sit up in a few days."

"You speak," says Dr. Millingen, "of the temperance of the people as being pointed out as the principal cause of gout being hardly known in this country (Turkey). If this is partly true, on the other hand I must remark that intemperance of late years is much on the increase ; and moreover, that it is carried on to an extent which, if stated, might be looked on as fabulous. Yet the gout is not more present, nor delirium tremens either. This immunity I can attribute to nothing else but to the expulsion of the alcohol circulating in the system, by the lungs and skin, during the stay in the bath."

Mr. Urquhart has, unfortunately, a personal and individual knowledge of the tortures of acute rheumatism. Nothing can exceed the beneficial effects of the hot-air bath in this distressing malady, especially when forced to a high and radiant temperature, and the analogy of treatment in ordinary use amongst us will explain on reasonable grounds where the success lies. Heat is the great comforter and depurator ; and the "bath is heat." Wrapt in its soft and voluptuous embrace, the particles of caloric seem to electrify every fibre of the rheumatic and permeate his every pore. The dry and contracted limb becomes moist and supple, and the torturing poisons of mortality are distilled into thin air.

Having thus considered the bath as a preservative *against* disease, and a destroyer *of* disease, having disposed of the objections to its adoption which are raised by the ignorant and the prejudiced, we

\* Op. cit. p. 14.

proceed to notice some of the processes of the operation itself, and offer a few remarks (justified by a considerable personal experience) upon its general agency. However perfect may be the material construction of a bath, there are various hindrances to its perfect utilisation, dependent upon the characters of the attendants, their correct knowledge of their duties, the timidity or rashness of bathers themselves, the temperature of the various chambers, the time of bathing, and the condition of those who seek health and comfort therefrom.

1. The individual and personal amount of animal heat possessed by each bather on entering the bath is a matter of much importance. It is true that the bath in many cases is a substitute for exercise, as largely illustrated in the country of its adoption—Turkey; but it is not wise to have undue reliance upon this means of replacing the invigorating influence of muscular action. The infirm and the crippled of necessity are prevented from taking the amount of exercise requisite to ensure the free development of heat. But it is not so with the great mass of bathers, and we strongly advise every one who has the opportunity of doing so to send the blood swinging into his capillaries before he enters an artificially heated chamber. The time of waiting for the fleshy dews is thereby lessened; you are soon bathed in perspiration, and with a less sense of fatigue than under opposite conditions. To many bathers this circumstance will make at least half an hour's difference in time, and to all it will involve a more beneficial and successful issue from the bath.

2. A very important question is the amount of artificial heat which different individuals are capable of bearing—and here we may state at once that every man's capacity for supporting a high temperature is much greater than he supposes it to be. As he becomes habituated to the bath every novice will make this satisfactory discovery. In the ordinary Turkish baths now met with in this country there is but one hot chamber which has, perhaps, an average temperature of  $130^{\circ}$ —the *pons asinorum* of bathers. In some baths there are two hot chambers, averaging, respectively,  $120^{\circ}$  and  $150^{\circ}$ . At the Hammam in Jermyn Street, which has been correctly described as “the finest bath in the world,” there are four hot chambers, the first of which is about  $120^{\circ}$ ; the second about  $150^{\circ}$ ; the third about  $175^{\circ}$ ; and the fourth (a recent addition, a chamber of radiation) ranges from  $180^{\circ}$  to  $220^{\circ}$ . The usual proceeding (and the proper one for beginners) is to enter the lowest chamber first, and to remain there until the skin begins to get moist; a move is then made to the second chamber, beyond which comparatively few have any need or desire to advance. Rheumatic subjects, and those of peculiar skin idiosyncrasies, find advantage from the third chamber, but with many it has the effect of drying up the perspiration and closing the pores of their skin. But it is very remarkable that this result is not equally pro-

duced by the still higher chamber of radiation. For reasons also, which appear as yet to be unexplained, persons are more tolerant of a great heat (say 200°) directly radiated from a stove in the chamber, than of a lesser heat (say 180°) of what is termed, in technical phraseology, transmitted heat. Dr. Goolden and Dr. Sheppard noticed this fact on the occasion of the opening of the radiating chamber in Jermyn Street. The latter says in a letter to Mr. Urquhart: "The room was at a temperature of 205° when we entered, and felt much less oppressive than the hot room of transmission upstairs, at a temperature of only 170°."\*

Mr. Urquhart himself writes: "This I can say, that such heat (radiated) is more endurable than common heat. There is a liveliness about it which transmitted heat lacks. You are conscious of an electrical action. It is to transmitted heat what champagne is to flat beer."†

It is probable that this toleration of radiated heat may find its solution in the increased dryness of the atmosphere, the chief requisite for electrical isolation. Professor Tyndall is of opinion, that Mr. Urquhart's preference for dry over moist air is "justified by philosophy as well as practice." We are not at all certain that the ordinary gradation from low to high temperature is not a mistake for *habitués* of the bath. The plan which we ourselves adopt is to proceed to the radiating chamber first, and we know many bathers who adopt the same practice as ourselves. Profuse sweating is then really a matter of fifteen or twenty minutes—not more—and we are in a condition to proceed to the chamber of 150°, where, after remaining for a few minutes, we are ready for the process of shampooing. The bath is thus got through with wonderful rapidity and without loss of time. And the chief reason for the adoption of this plan of inverting the order of gradation is that we find ourselves more capable of bearing an elevated temperature when the circulation is at its highest, and no sense of languor has been produced by the intermediate chambers. There is no necessity to remain in the hottest chamber long. Five or ten minutes will bring up the capillary circulation, and the bather, if he finds the heat greater than he likes, may satisfactorily complete the process of sudorification where the thermometer is at a lower range. We have little doubt from what we have observed at the Hammam that many of those who, after remaining a long time in the first chamber, essay the higher ones (either of transmission or radiation), and find an immediate sense of exhaustion, would have beneficially borne the latter as a thermal initiation. We commend this suggestion to the consideration of bathers, by way of an experiment. There is one circumstance which we think is not sufficiently borne in mind by those who seek for

\* 'Manual,' p. 412.

† 'Manual,' p. 328.

health and "condition" in the bath, and that is the importance of perfect repose and tranquillity during its operation. We like to see a man take his book or his newspaper with him, smoke his cigar, and sip his coffee, waiting quietly for the welling up of his living streams. With a view to facilitate this, more light might be thrown into the hot chambers at the Hammam, where it is difficult to read when the weather is at all gloomy and overclouded. In many the sudorific process is retarded by constant fussiness, running to and fro, anxiety as to whether this is right or that is wrong, or how long they are to "wait for the moving of the waters." These irritable creatures should bathe in private, and not disturb the enjoyment to their neighbours of a beneficent luxury.

We now come to the process of shampooing—*le massage*, as the French phrase it, and which in that language Dr. Gosse well describes:—"Le massage consiste en une série de manipulations exercées à la surface de la peau, et dont l'action mécanique, peut-être électrique, favorise diverses fonctions du corps, soit dans l'état de santé, soit surtout dans les cas de maladies."\*

To the uninitiated, the shampooing is the great mystery of the bath, about which they have heard, and from which they expect so much. But its operation is greatly over-estimated, and its effects are greatly exaggerated. The highly educated skin of an habitual bather, in perfect health, needs little or no shampooing. It is otherwise, however, with novices, whose skins bear about the same relationship to that of an habitué, as a dry and arid common does to a rich and well-cultivated meadow. But to the diseased, and especially to the rheumatic, the shampooing, when properly performed, is a most beneficent operation. Yet how few are there who know how to shampoo properly. A good shampooer is worth his weight in gold; a bad one is worth less than nothing. It is to be feared that sufficient attention is not paid to this process, and that proper instructions are not given to a new hand, by those whose experience has given them a correct knowledge of the sensational geography of the human frame. It has been the fashion for Eastern travellers to speak extravagantly of the shampooing, and to measure its success by its violence; and many strangers to the bath, on the occasion of the first visit, have a kind of wondering dread as to what they have to expect. "You are laid out at full length," says Sir Alexander Burns, in his "Travels in Bokhara," "rubbed with a hairbrush, scrubbed, buffeted, and kicked; but it is all very refreshing." The late Mr. Thackeray speaks of the process which he experienced at Cairo, and strongly demurs to its agreeableness. The following is a pleasant description of what an Eastern traveller experienced in a Moorish bath at Medeah. It will be seen that, like the baths of the Turks, the

\* Op. cit., p. 101.

atmosphere is highly charged with vapour. The bath now being restored to ourselves is the dry hot-air bath of the Romans ; and we hold that its dryness is a measure of its efficacy.

"The pavement was flooded with hot water, and at first the heat was so oppressive I could hardly breathe ; but the feeling went off after having been seated for a few minutes on a stone bench in the centre of the bath. We were now all laid out in a row on the pavement, each stretched in a blue cloth, with a rolled-up towel under the head, and an operator for each person. My attendant was a musical character, for when he commenced shampooing he accompanied his labours with a song, marking the chorus at the end of each verse by a punch of extra force. Being well soaked and softened, I was now scrubbed with a camel's-hair glove, until I felt as if I had no skin at all. I then had my legs and arms pulled ; my head screwed round with a jerk ; was then doubled up like a boot-jack, by his kneeling on my shoulders ; my arms were brought behind me, and while his knee was forced into the hollow of my back, two or three dexterous twists put in motion each rib and vertebra ; he then finished by endeavouring to crack, separately, every toe and finger."\*

Now, this is unquestionably the traditional shampooing of the East. We have ourselves experienced the same sort of handling in the baths of St. Sophia, at Constantinople. But to its necessity, to its efficacy, to its desirableness, to its freedom from danger, we altogether demur. It is monstrous that a set of ignorant boobies, who know no more of anatomy than they know of the moon, should crack and unrivet mortality after this sort, under the plea of giving suppleness and pliability to the delicately-constructed human frame. A wretch shampooed the writer in the principal bath in Dublin two years ago, who essayed this process of violent and unmeasured roughness. He twisted, and cracked, and slapped us till we were on fire. We made up our minds to bear it without complaining, in order to see to what extent our friend would carry it, and how far we were capable of supporting such a terrific ordeal. We were sore for ten days at least. Mr. Erasmus Wilson seems to think that Asiatics, and Europeans born and bred in the East, enjoy a pliability of frame unknown to our Northern race. This may be so, and probably it is derived from the use of the bath from childhood before the joints are set. Such a circumstance may palliate and even excuse the kind of shampooing we have deprecated as injurious in the East ; but it will not justify its adoption with Europeans of unductile structure and unsoftened organisms.

The great fault with most shampooers in our Anglo-Turkish Baths is a want of tactile delicacy, arising from an ignorance of the human

\* Quoted by Mr. Erasmus Wilson.

structure. A good and well-informed shampooer will begin softly and gently ; he will toy with that delicate surface studded with millions of pores, and woo it into responsive sympathy with his "*manum doctum*." Gradually the pressure will become firmer, especially over the joints ; he will try to mould the muscular cushions to his finger and thumb ; he will stretch the ligaments without tearing them, he will bend the joints as Nature bends them. He will not press (as many do in ignorance) hard down the course of the large nerves and lymphatics ; he will do his work uniformly and without favour, not devoting more time to one limb than another, unless there is a difference in their structural integrity. It is dreadful to be shampooed in a one-sided manner, and made to feel that the skin is not brought equally on both halves of the body to a "just sense of its obligations."

There is a practice growing up among shampooers in the London baths, which we take this opportunity of strongly deprecating ; it is that of hurrying men through the sweating rooms before they have duly unloosed the pores of the skin, and then attempting to supply the place of the soft and unctuous sudor, the existence of which is the first element of satisfactory shampooing, by means of water. For this purpose the shampooers have basins of water at hand, in which they dip their hands with a varying frequency. We submitted the other day (for the purpose of seeing the extent to which a so-called shampooer would carry it) to a visitation of this kind for some minutes ; and then suggested to our pluvial friend the desirableness of fetching us an umbrella. It is a mistake to produce this artificial moisture, even where the perspiration is not abundant ; but where it is otherwise, when the human fountains are at full play, there is no sort of excuse for it.\*

4. Having passed through the elaborate process of shampooing, the bather is conducted into the Lavatory, where he is well washed with warm water, subjected to gentle friction with the glove, which should be made with the hair of the camel or the goat — our modern substitute for the Roman *strigil*. Thus writes an enthusiast :

"The shampooer stands over you ; you bend down to him, and he commences from the nape of the neck in long sweeps down the back, till he has started the skin ; he coaxes it into rolls, keeping them in and up till within his hand they gather volume and length ; he then successively strikes and brushes them away, and they fall

\* There are several admirable shampooers at the Hammam in Jermyn Street, who can handle a human sufferer with soft and beautiful precision, or grasp a living personality of health with force and power. They have a thorough knowledge of their profession.

"Percurrit agili corpus arte tractatrix,  
Manumque doctum spargit omnibus membris."

right and left as if split from a dish of macaroni. The dead matter which will accumulate in a week, forms, when dry, a ball of the size of the fist."

This may be so with the novitiates and the unclean, but not with a properly educated skin. There is comparatively little epidermis peels off in those who are habituated to the bath. We are disposed to think (and there are those who agree with us) that it would be better to use the glove prior to the first lavement with warm water, immediately on issuing from the Calidarium, while the skin is still unctuous with its own secretion.

5. We are now ready for the washing with Castile soap, worked up into a frothy lather by the fibres of the palm. Streams of warm water follow, and, thirsting at every pore, we are longing for the cold plunge, or the "beehive," or the douche. This is the crowning luxury of the bath, from which there is no danger, which Nature—the safest guide—suggests to you by the sensations imparted by the previous process; by which the sense of fatigue is banished, by which the pores of the skin are closed against further exudation, unless (as in those of most robust and vigorous health) the reaction is so great as to cause fresh transpiration. But these can bear it, and it is a sign of their vigour and their power. Perfect repose in either a sitting or recumbent position is now necessary. Coffee or lemonade, or a substantial repast, may also be taken to advantage, according to the individual taste of the bather. The body should continue partially exposed, or not, the sensation of each bather being the proper guide.

And now we dress, and are ready to return to the outside world, to take our places among "the great unwashed," renovated both in body and mind, and in a condition to "bid defiance alike to wind or weather, to rheum, cough, or catarrh."

These are the processes which, in successive stages, make up and constitute "the bath"—a name fit only to be applied to that elaborate combination of actions which we have here delineated, and of which the splashy puddling of an ordinary ablution is quite unworthy. This is "the bath that cleanses the inward as well as the outward man, that is applicable to every age, that is adapted to make health healthier, and alleviate disease whatever its stage or severity."

Nor are its hygienic and medical advantages alone confined to man. In Ireland they have been extensively employed by Dr. Barter for farming purposes. Horses, cattle, sheep, dogs, swine, and poultry, have alike been subjected to the bath. He says that the proportion of deaths to recoveries in the treatment of cattle distemper thereby does not now exceed one in ten, while it used to be one in three. Many of our readers will call to mind the letter of Admiral Rous in the 'Times' of March 26th, 1863, where he contrasts the barbarous system of modern horse-training by "drastic

purgatives, hot clothing, hot stables, and four and five-mile sweats," with that "modern revolution," effected chiefly by Mr. Urquhart, "which will enable a trainer to bring his horses to the post in first-rate condition, without subjecting them to a destructive apprenticeship." Any process which will bring a horse into condition and yet save his legs, must be of immense importance to the racing community, and to the poor horse himself. We have not space to extend our inquiries into this subject. In connection with farm purposes generally a wide field of investigation has been cultivated, and a rich harvest of information garnered in. The mortality in young stock is diminished; colds are less frequent; the productiveness of stock is increased, as also its power of creating flesh and milk; and many collateral benefits are derived. The 'Manual' contains an amount of interesting information on this point, which will repay every agricultural reader.

Thus, with the limited means at our disposal, we have brought under consideration the important subject of the revival of the Turkish or Roman bath amongst us. Our perfect type of bath is the Roman bath without its anointing—the Turkish bath without its moisture—in fact, the "hot-air-bath." From a careful study of its effects both in health and disease, we have not hesitated to manifest our belief in its efficacy, and our desire that it should become a thoroughly national institution. We have endeavoured to divest the public mind of the prejudices against it, and to point out the traditional absurdities which have hitherto prevailed with respect to the transition from heat to cold. We have shown the importance of the proper physiological understanding of the skin, in order to make it subservient to its true uses, and impart to it a "just sense of its obligations." The entire subject of the bath has been approached by us as we should approach any other therapeutic agent. The question is not whether "Thermotherapeia" is calculated to damage the interests of the profession as a body, but whether it can advance the general cause of suffering humanity. We believe that both hygienically and medically it can do this, and that Dr. Millingen has made no exaggerated statement in saying that we are "engaged in an attempt which, if successful, will confer, in an hygienic point of view, a service on our countrymen as eminent as the discovery that has immortalized the name of Jenner."

It remains for us only to caution the public against the spurious imitations of the genuine structure, which play their short but pernicious hour among the population of this great metropolis. Underground cellars, ill-ventilated and worse-lighted, should not constitute the home of this great revival among a people whose ambition is unmeasured and whose wealth is boundless. Under the superintendence of Mr. Urquhart has been raised a "peerless temple," such as no other country in any quarter of the globe can boast of. It is "at once the

finest bath in the world," as it was called by a daily paper in speaking of the recent visit thereto of the Prince of Wales. It is well built, it is well appointed, it is well served; its air is dry, its water is pure, its ventilation is perfect, and its power of imparting delicious sensations is beyond all expression. May it serve as the model for many more in this country.

Beyond the narrow limit of each good man's own fireside, we thought there was only one paradise in England, and that it was the Crystal Palace. There is another. It is the Hammam in Jermyn Street.

E. S.

*Du Suicide et de la Folie Suicide*; par A. Brièrre de Boismont, &c., &c., &c., Deuxième édition, revue et augmentée. Paris : 1865, pp. 763.

*On Suicide and Suicidal Mania*. By Dr. Brièrre de Boismont. Second edition, revised and enlarged. Paris : 1865.

THE ugly fact of suicide is one of the strangest anomalies that meet us in the complex phenomena that constitute the world's history. If there may be supposed to be one passion or principle more powerful than another of those common to the human race it would surely be the love of life; yet by a strange contradiction it happens, that, from all time, and in all ages, men have been ready to sacrifice that which it is an instinct with all created beings to preserve. From Saul to Judas, and from Pilate's time to the present day, this mode of escape from the troubles of this world has prevailed—how is it, then, to be explained?

It is a problem which has puzzled philosophers and physicians alike. The frequency of its occurrence, its being met with in all lands and in every nation, the most and the least civilised,—these and other considerations have led some to think that there must be a common principle on which this phenomenon could be explained; others have thought that an act so opposed to all rational instincts can only be interpreted as a phase of insanity, and that the self-deprivation of life is inconsistent with the full exercise of reason and volition, while others, again, have included it in the wide catalogue of crime. We believe that where so many and such varied motives are in play, and where the conditions are so rarely the same, there is no one theory that will apply to every case, and that not even the indefinitely extensible term of insanity can be fairly made to shelter every suicide. The title of M. de Boismont's book clearly indicates the primary division of all such cases, for he styles it—"On Suicide and the Suicidal Mania," thereby recognizing, that, in a certain pro-

portion, at least, the victims are free agents, and the two classes are further particularised thus.

"The motives which induce rational men to commit suicide have their origin in the passions, in desires and regrets; in fact, in all the ordinary excitements of life. With the insane, on the contrary, the tendency to suicide is occasioned by hallucinations, illusions, delirium, and irresistible impulses, a genuine state of disease, as shown very plainly by the symptoms of the mania. The difference between these categories is clearly shown in the following examples: A military man, obliged to quit his profession in consequence of a revolution, finds no other distraction from the *ennui* resulting from this change of life than the excitement of gambling. The passion grows upon him, and completely masters him. After some years of excitement and despair, of resolutions and remorse, he makes a halt. He examines coolly his position; half his fortune is gone, but there remains enough to educate his son, and insure an easy independence for his wife. 'I take advantage,' he wrote, 'of this gleam of reason to prevent your ruin,' and then shot himself. A melancholic imagines himself the object of persecution. Soon he sees himself surrounded by imaginary enemies who threaten him, and poison his food. He has no longer any rest; existence becomes insupportable to him; death seems to him the only escape from such torments, and he hangs himself. Can these two men be placed on the same footing? Common sense, without the aid of science, can answer the question."

The greater interest must always attach to the former of the above classes, for in the latter, the suicidal tendency forms only part of a general derangement of the mind, and, once admitting that a man's mind is diseased, it ceases to be of much interest to speculate on motives or conduct over which he has any longer but little control. But amongst those who still preserve their free will and liberty of action, all the avenues to the mind are open to investigation in the search for a cause; the character of the individual; the circumstances of life; moral and physical influences. The most casual survey of these things must make it clear that many elements go to make up the crisis of a suicide, and the thorough analysis of these is the first step needful in determining the character of the act.

M. de Boismont's book treats largely of the various causes, proximate and remote; the influence of sex, season, hereditary characters, &c.; his inferences being based on an analysis of 4595 cases, but as these have been considered in a former number of this Journal, we shall not stop to treat of these details on the present occasion. We propose, rather, to trace suicide as it has showed itself at various epochs, and to note how it has been influenced by the ever varying condition of civilisation.

The difference between the cases above cited, is not more striking than between many of those related as occurring among sane and responsible men, and it would be impossible fairly to include such in one category. For example, those instances where men have sacrificed themselves for the good of their country, either deliberately or in a moment of peril, to avert a greater danger, cannot be confounded under the same title as those who have thrown away their lives from false sentiment, from vanity, pride, or inability to meet misfortune. It is said of Lycurgus, that when he had accomplished his great work of legislation in Sparta, he stated it was necessary that he should consult the Delphian oracle relative to his new laws, and made all the Spartan magistrates and people take a solemn oath that they would observe and keep his laws inviolate *till his return*. When he learnt the answer, "that the laws were excellent, and would render the people happy who would observe them," he sent it back in writing to Sparta, but resolved never to return himself, in order that the people might never be absolved from their oath, and accordingly starved himself to death. This, and similar instances, form a striking contrast to the death of Sardanapalus in the midst of his orgies, or to the more modern cases in which wounded pride, vanity, and folly have stimulated the hand of the victims against themselves. Such an example is that related by Horace Walpole, of a man named Nourre, with whom Lord Windsor had quarrelled, and who on that account sent his adversary a challenge, which his lordship declined, on the score of being too old to fight. Nourre was furious at receiving such an answer; and, as the tale goes, went home and cut his throat! It has been too much the fashion to seek for the causes of suicide solely in the constitution of the individual, and to this many of the fallacies prevalent on the subject are due. Man is so much the creature of circumstances that we cannot afford to neglect, in estimating his actions, the force of the conditions of his existence, whether moral or physical. These influences are tolerably recognised as regards the conditions of health and disease, but it is quite different in dealing with his moral nature. Age, sex, season, climate, are all allowed to have their influence in the production of disease, but are grudgingly insisted on in the contemplation of moral disease. By far the most important element in the consideration of the subject is that of hereditary influence; yet how little attention is paid to it. Man enters the world with certain inherent qualities and tendencies which he is powerless to strive against, and the development of these must depend greatly on the circumstances in which he finds himself placed. One is gifted with a strong will, and with robust health, and is certain of success; another with a sensitiveness of nature which makes him so keenly alive to the unkind breezes of fortune that he sinks before ills which would only rouse a stronger temperament to more determined resistance; a

third carries within him the seeds of disease which paralyses his energies. How can these all be judged by one standard? But if natural qualities require to be considered, not less imperative is it to weigh the force of outward circumstances? Animals are changed by the conditions under which they are placed; acquire new qualities, and their nature is even modified; plants will vary in growth and appearance under different modes of cultivation, and it is the same with the human animal. And if it is so with natural qualities or physical peculiarities, *d' fortiori*, would it be so with man's moral nature which is not amenable to the same everyday rule that measures growth, or estimates bodily conformation? The truth of these views may be tested by an appeal to history.

According as the civilisation of the world has varied, so has the passion for suicide, and even at periods when it has been equally frequent, the motives have been vastly different, according to the condition of the people.

Thus, in the earliest ages, suicide was openly justified by philosophical writers, and practised with great frequency; and in the present day, the same is the case in certain countries, such as China and Japan; but by people ignorant and inferior to the former in every respect.

It may be stated in general terms, dividing the world's history into three epochs, that

1st. The earliest ages, by their philosophical and religious doctrines, essentially pantheistic and mystic, were very favorable to the development of suicide.

2nd. That the middle ages, on the contrary, by the predominance of the religious sentiment and a spiritual philosophy, succeeded in diminishing the progress of this habit, and

3rd (to borrow M. de Boismont's phrase), That the present age, by propagating doubt, and by making self-love, scepticism, and indifference into a sort of code for the majority, has given a fresh impulse to suicides. Thus three epochs so dissimilar as those of ancient philosophy, polished, refined, and learned; of barbarism and ignorance; and of modern doubt, passion, and selfishness, have converged in a common result.

In the earliest times the doctrines of the Buddhists and similar sects inculcated such an indifference to life, that it was no wonder it was sacrificed on such slight pretences. When Buddhism extended to Japan, the pantheistic ideas of India accompanied it, and one historian relates that it was no uncommon spectacle to see along the coast boats filled with fanatics who threw themselves into the sea weighted with heavy stones, or who scuttled their vessels, and so gradually drowned themselves, singing the praises of their idols as they went down. The same doctrines produced like results in China.

Africa had, like the eastern nations, its philosophical sects, who professed a sublime indifference to death, and the priests of Egypt contributed no little to the popular taste for suicide by their doctrine of metempsychosis. Sesostris, one of their great kings, having become blind in his old age, destroyed himself deliberately. But it was in the time of Marcus Antoninus and Cleopatra that suicide enjoyed so great a popularity, that a society was formed, whose members determined to put an end to their existence in great numbers in company. All eastern nations, however, did not share this propensity, for among the Chaldeans, the Persians, and the Jews, suicide was rare. Among the philosophical schools of Greece and Rome suicide was openly justified. Diogenes was the most famous illustration of this tenet of the Cynics, and Hegesias is said to have described so eloquently the miseries of life, and the delights of a self-inflicted death, that a great number of his pupils killed themselves on leaving his lecture-room. The king, Ptolemy, was so alarmed at this epidemic, that he ordered the school to be closed.\* Zeno, the founder of the Stoicks, when advanced in years, killed himself (B.C. 264); and Cato, Lucretius, Petronius, and Epictetus, all men of learning and fame, carried out the principles of their false philosophy. Seneca stands pre-eminently forward as the defender of suicide. He says: "Does life please you? live on. Does it not? go from whence you came. No vast wound is necessary; a mere puncture will secure your liberty. It is a bad thing, you say, to be under the necessity of living; but there is no necessity in the case. Thanks be to the gods, nobody can be compelled to live."†

The advent of Christianity marked a new era in the history of suicide. It is true, at first, its influence was slight in this direction; but it could not well be otherwise, considering the little power it had, the miserable state of society, and the sufferings induced both by the crimes of the Cæsars, the endless civil wars, and the force of the previously held opinions. Saint Augustine was the first to seriously oppose the arguments of the suicidists; and subsequently the councils of Arles, of Auxerre, and of Troyes, promulgated the penalties of the church against the practice. But the gradual spread of Christian doctrine did much to mitigate the evil by the change of life and altered morality. There were, nevertheless, evils of an opposite nature contingent on the spread of religious opinions; witness the epidemic of mania and suicide among the inmates of the monasteries in the eighth and ninth centuries. The change in public opinion is well shown by the treatment some attempts at suicide met with in the fifteenth century. We read that "In January, 1484, news was brought to Metz that a bishop of Strasbourg had hung himself, and that the judicial authorities of the said place had put him

\* *Tuscul, lib. i, p. 34.*

† *Winslow's 'Anatomy of Suicide,' p. 23.*

into a barrel in the Rhine, and left the body to take its chance." The chronicles of Metz also speak of a man who hung himself in a love fit, but who was rescued in time, and having been arrested was stripped naked and well whipped! Towards the end of the sixteenth century a reaction set in, and writers began to justify suicide, which became again more frequent; but this was checked by a greater vigour of religious faith in the beginning of the eighteenth century. Another fifty years, however, witnessed a change, and with the growth of the melancholy pseudo-philosophy of Rousseau, Werther, and kindred writers, suicide became once more fashionable. Dr. John Brown, of Edinburgh, in his recently published description of the Enterkin Pass, in Scotland, alludes in the following terms to the mode of burial of suicides in that district. Speaking of a hill called the Lowthers, he says:

"On its summit the counties of Lanark and Dumfries meet, as also three lairds' lands, and here it was the custom, *up to fifty years ago*, to bury suicides. Any more solitary and out-of-the-world place could hardly be conceived. The bodies were brought from great distances all around; and, in accordance with the dark superstitions of the time, the unblest corpse was treated with curious indignity—no dressing with grave-clothes, no *strieking* of the pitiful limbs; the body was thrust, with the clothes it was found in, into a rude box, not even shaped like a coffin, and hurried away on some old shattered cart or sledge, with ropes for harness.

"One can imagine the miserable procession as it slunk, often during night, through the villages, and past the farmsteads, every one turning from it as abhorred. Then, arrived at this high and desolate region, the horse was taken out, and the weary burden dragged with pain up to its resting-place, and carried head foremost as in despite; then a shallow hole dug, and the long, uncouth box pushed in—the cart and harness left to rot as accursed. The white human bones may sometimes be seen among the thick short grass; and one who was there more than fifty years ago remembers with a shudder still, coming—when crossing that hill-top—upon a small outstretched hand, as of one crying from the ground."

The condition of society in the present century, so different to anything that has gone before, and in which the race of life has been increased so wonderfully in intensity, has, of course, multiplied the sources of suicide, while it has added to the force of existing ones. The excitement of the struggle for power, wealth, position, and knowledge, has given a keenness to existence which no previous age has known, has exacted many penalties in return for the advances of civilisation.

Thus diseases of the nervous system have received a notable

impetus, and it is in such that suicide has its most frequent origin. But apart from the question of disease, every incentive to suicide has been quickened, the force of passion, the shocks of disappointment and despair ; the dissipations, amusements, and the anxieties attendant on ordinary occupations, have all received a new impulse from the heightened activity of our social system ; and, at the same time that fresh sources of danger have been created, the counter-influence of a religious faith has been lessened. While men's hold on their former religious attachments has been weakened, a flood of doubt has been let loose over the face of the earth, uprooting the faith of centuries, to substitute for it an equally credulous scepticism, and a moral anarchy has ensued. Whatever the future advantages of such commotions may be, by exciting intellectual activity, or in more indirect ways, it can hardly be doubted that the immediate results of the struggle have been most disastrous to the minds of the majority, who, cast adrift in a sea of uncertainty, fall an easier prey to evil influences of every sort.

M. de Boismont, in comparing the spirit of melancholy, as it has existed at various periods, says :

" Modern melancholy has also its origin in the sad feeling of how much there is incomplete in human destiny ; but, instead of having recourse to faith, it suffers itself to be carried away by doubt, and is arrested by the contemplation of the contrast which exists between the wishes of mankind and their reality. There is there a terrible uncertainty, in which imagination loses itself, and the will is deprived of its power. But this self-contemplation of the soul insensibly enervates it and renders it incapable of action. This incapacity of action soon extinguishes its vitality ; and there being no faith to fall back upon, there only remains the unknown—the enigma. As a termination to these sorrows appears the idea of suicide, as the only means of escaping the fatigue of living and of learning the decrees of fate."

It is not surprising, when the state of modern civilisation is taken into consideration, that suicide should be found to be on the increase, nor is it to be wondered at that the evil is more rife in towns than in the quieter life of the rural districts. These facts are well established by recent statistics. M. Legoyt in his estimate of the annual average of suicides in France, gives it as follows, in quinquennial periods :

|                    |      |             |     |           |
|--------------------|------|-------------|-----|-----------|
| 1827 to 1830 . . . | 1739 | suicides in | 54  | millions. |
| 1831 — 1835 . . .  | 2119 | "           | 64  | "         |
| 1836 — 1840 . . .  | 2574 | "           | 76  | "         |
| 1841 — 1845 . . .  | 2951 | "           | 85  | "         |
| 1846 — 1850 . . .  | 3446 | "           | 97  | "         |
| 1851 — 1855 . . .  | 3639 | "           | 100 | "         |
| 1856 — 1860 . . .  | 4001 | "           | 110 | "         |

"Thus in thirty years, there has been an increase of 56 suicides in every million of inhabitants, or 1·86 a year. This increase is continuous, but variable; it does not stop, as the records of criminal justice for 1861 show; that year, the suicides (complete) increased at the rate of 10 for every 100; compared with 1860 there were 4554 instead of 4050, and in the department of the Seine (*i. e.* Paris), they rose from 695 to 769."

This increase is not confined to France, for it has been demonstrated by M. Legoyt to exist in most parts of Europe. The most rapid increase has been observed in Saxony, Denmark, and Sweden, varying from 5 to 2 yearly for every million of people, while in France the rate is 1·86; in Bavaria, 1·77; in Mecklenburg, 1·80; in Prussia, 1·40; and in Hanover, 1·20.

In Austria, the proportion increased to 43 in a million during the years 1852 to 1857.

In Bavaria, the number of suicides has been progressively increasing for eighteen years. From 1844 to 1860, they increased at the rate of 50 per million; from 1851 to 1854, rising to 61, and from 1857 to 1860, to 73. Dr. Mayer who has analysed the Bavarian statistics, remarks on the numerical inferiority of the women as compared with men, and also that, taking into view the relative strength of the sects as regards population, suicide is three times more frequent among Protestants than among Catholics, and about one third more common among them than with the Jews. He further states, that half of the victims of suicide are in good health; that about one fifth suffer from mental derangement, and about one fourth from bodily disease.

In Belgium, the proportion was 55 per million, or an average of 243 a year, in a period of ten years.

Denmark, from 1856 to 1860, registered 7326 suicides, an average of 447 a year, or 288 per million.

In Spain, 198 suicides were recorded in 1859, and in the following year 235, giving an average of 14 per million for the two years, but this is manifestly incorrect.

In Hanover, the numbers were from 1848 to 1852, 196, or at the rate of 109 per million, and, from 1853 to 1858, 128.

Prussia, as is allowed by several authors, holds a high rank as regards the increase of suicide. M. Legoyt gives the following figures in proof of the above statement:

|             |   | Men.                           | Women. |
|-------------|---|--------------------------------|--------|
| 1814 — 1820 | . | 637 and 155 committed suicide. |        |
| 1821 — 1830 | . | 872                            | 189    |
| 1831 — 1840 | . | 1143                           | 254    |
| 1841 — 1850 | . | 1354                           | 315    |
| 1851 — 1860 | . | 1715                           | 402    |

This table shows an increase, in thirty-five years, of 49 per million, and of 1·4 as yearly average. In the towns the suicides were 187, and in the country, 102 per million.

In Saxony, the proportion was, from 1847 to 1852, 384, or 213 per million, and from 1853 to 1858, 512, or 251 per million.

The increase in Sweden is very notable.

It is stated,\* that "the suicides have increased in the present generation to nearly five times what it was eighty years ago. For example, in 1776 to 1780, out of every 1000 deaths of males 1·1 was by suicide, but in 1851 to 1855, not less than 5·2; out of every 1000 deaths of females in 1776 to 1780, 0·4 was by suicide, but 1851 to 1855, not less than 1·3."

From 1841 to 1845, the annual average was 212, or 60 per million; from 1846 to 1850, 229, or 67; at the end of another five years, 253, or 71, and at the close of 1859, 204, or 66 per million.

Thanks to the wonderfully ample and exact tables of M. Hendrik, published under the title of 'Vital Statistics of Sweden,' we are able to get positive information on many points of great interest as regards that country. By these tables, we find that the ordinary death-rate for the five years 1851 to 1855, and the ratio of suicides to all deaths for the same period, was as follows :

| RATIO OF SUICIDES. |        |          |           |
|--------------------|--------|----------|-----------|
| Death-rate:        | Males. | Females. |           |
| 1851 . . 2·08      | 0·49   | 0·15     | per cent. |
| 1852 . . 2·27      | 0·67   | 0·15     | "         |
| 1853 . . 2·37      | 0·50   | 0·12     | "         |
| 1854 . . 1·98      | 0·48   | 0·14     | "         |
| 1855 . . 2·15      | 0·42   | 0·10     | "         |

The 1267 suicides which occurred during this period were thus divided between the two sexes, 1015 men, and 252 women:

The increase of population for these five years, was at the rate of 4·50 per cent.

In England and Wales (according to the 'Judicial Statistics'), the number of suicides ascertained by inquest (the surest test) was, in 1861, 1324, viz., 961 men, and 363 women, and, as that was the year of the census, it is easy to calculate with exactness the proportion to the total population.

The population was returned at—

|                   |
|-------------------|
| 9,776,259 men.    |
| 10,289,965 women. |
| <hr/>             |

Total . . 20,066,224

The proportion of suicides to the number of inhabitants would,

\* 'Journal of the (London) Statistical Society,' June, 1862, p. 135.

therefore, be 65·9 per million for the total; or 98·4 per million for males, and 35·2 for females.

The ordinary death rate is 2 and a fraction per cent. It was 2·139 for the quarter ending September, 1864.

In 1860, the proportion was said to be 32 per million in the United States, but in a country of such extent, and with so many disturbing causes at work, such statistics must be of very doubtful accuracy.

The same remark applies with equal force to Russia.

M. Mathieu, the celebrated astronomer, has computed the number of suicides at each epoch of life, and, arranged in periods of ten years, the proportions appear as follows :

|                                    |                          |
|------------------------------------|--------------------------|
| From 16 to 21 years of age . . . . | 1 in 22,417 individuals. |
| 21 „ 30 „ „ „ „                    | 11,143 „                 |
| 30 „ 40 „ „ „ „                    | 10,425 „                 |
| 40 „ 50 „ „ „ „                    | 8,078 „                  |
| 50 „ 60 „ „ „ „                    | 8,378 „                  |
| 60 „ 70 „ „ „ „                    | 8,125 „                  |
| 70 „ 80 „ „ „ „                    | 8,717 „                  |
| 80 and upward „ „ „ „ „            | 10,544 „                 |

From this table, it appears that from 40 to 50 years of age, the tendency to suicide is at its maximum.

The proportion of men to women is always in excess, as much as 3 to 1 in France.

We may form some idea of the relative frequency of the various modes of suicide, by reference to the following table by M. Legoyt, showing the deaths by such means, for the whole of France, over a period of thirty years, viz., from 1827 to 1860.

|                                  | Men.   | Women. | Total. |
|----------------------------------|--------|--------|--------|
| 1. Strangulation (hanging) ..... | 12,152 | 2,654  | 14,806 |
| 2. Drowning .....                | 7,668  | 4,177  | 11,845 |
| 3. Fire-arms .....               | 4,337  | 53     | 4,390  |
| 4. Asphyxia (by charcoal) .....  | 1,917  | 1,307  | 3,224  |
| 5. Cutting Instruments.....      | 1,272  | 250    | 1,522  |
| 6. Precipitation .....           | 862    | 518    | 1,380  |
| 7. Poison.....                   | 474    | 282    | 756    |
| 8. Other Means .....             | 228    | 54     | 282    |
|                                  | 28,910 | 9,295  | 38,205 |

It appears from this table, that the commonest methods are hanging and drowning ; and this is equally the case in Belgium, Denmark, Spain, Mecklenburg-Schwerin, and in Saxony. Women have a preference for certain kinds of death ; asphyxia by charcoal is that by which they most nearly approach men, then comes precipitation

from heights, and then poison. They have, as a rule, a horror of blood, and the deaths from stabbing, wounds, or fire-arms, are those in which the women are in the smallest proportion.

It is now well established that suicide is by no means a phenomenon peculiar to the cold and dreary season of the year, and the notion that the English were a gloomy race, largely addicted to self-destruction in November, has been long disproved. M. Guerry has calculated the daily average for twenty-six years, from 1835 to 1860, on a total of 85,344 suicides, and finds that the maximum is in June, and the minimum in December.

The following is the distribution according to months, of 10,000 cases occurring between 1855 and 1860 :

|                    |      |                     |      |
|--------------------|------|---------------------|------|
| December . . . . . | 638  | June . . . . .      | 1084 |
| January . . . . .  | 681  | July . . . . .      | 1011 |
| February . . . . . | 748  | August . . . . .    | 889  |
| March . . . . .    | 839  | September . . . . . | 790  |
| April . . . . .    | 937  | October . . . . .   | 724  |
| May . . . . .      | 1019 | November . . . . .  | 640  |

The difference in civilisation gives quite another character to the suicides in eastern countries, such as China, Japan, or India. In these there is no longer the restraining power of public opinion, to put any check upon the practice, no religious sentiment to interpose any obstacle, indeed, both these forces so potent in themselves are exerted on the side of the practice, which is considered on all occasions justifiable, and in many a meritorious sacrifice. In this way the suicides form a curious contrast to those in European life, where prolonged misery or perverted passion culminates in an act which has ceased to find an apologist.

Those in the East, however, who profess the Mahometan creed are not at all given to suicide, their faith in everything happening according to the will of Allah, making them resigned to any misfortune ; and travellers say, that in Persia this mode of death is quite unknown.

Our recent acquaintance with the Chinese has furnished many facts illustrating their strange indifference to life, and the wholesale way in which they commit suicide. This barbarous custom dates from the earliest time, and seems to flourish with unabated vigour. The correspondent of the 'Sun' newspaper, in 1856, in describing the scenes at Canton, says that at one part there were houses built for a special, but curious purpose, for in them the rebels condemned to death might hang or poison themselves to avoid public execution and disgrace, and many of them, especially the women, availed themselves of this privilege.

A French writer, of some learning, says, "it is impossible to give an idea of the extreme readiness with which the Chinese kill

themselves; the slightest thing being enough to induce them to hang themselves, or else throw themselves down a well, these being the two most popular modes of suicide. In other countries, when a man wants to revenge himself upon an enemy he tries to kill him, but in China it is the other way, he kills himself. This anomaly depends on several causes, of which a principal one is this, that in China the law makes those responsible who are the cause or occasion of the suicide. Hence, when a man seeks vengeance on an enemy he has but to commit suicide, and he is sure by this means to involve his enemy in a horrible mess. The latter falls at once into the hands of justice (!) which, at least, tortures and ruins him completely, if it does not deprive him of his life. The family of the one who has destroyed himself generally gets in such cases considerable damages, and it is consequently not uncommon to see men, carried away by a villainous devotion to their family interests, go and destroy themselves at the houses of the rich!"

Foreign travel and example does not seem to cure the Chinese of their passion for suicide, for we read of a troupe of actors who, finding themselves penniless at New York, resolved to hang themselves *en masse*. This feat, thirty-three accomplished in the space of five minutes by means of ropes attached to some hooks driven into the walls of the room they occupied. Every one is familiar with the Japanese custom of the "happy despatch," a more inexplicable mode of suicide than any other perhaps.

In India, it was the custom for widows to immolate themselves, but this barbarity has been abolished by the interference of Government.

In some parts of India, a particular mode of suicide is practised, perhaps less generally known than those previously mentioned. At Surat, and other places, there are hospitals devoted to the treatment of animals of every sort, admitted for age, illness, or infirmities, but the strangest thing in connection with these places is, that at the entrance there is always a large ditch or trench, not less than twenty yards in length by fifteen in breadth, into which the natives pour all sorts of grain which they bring regularly, and which serve to feed a horde of insects.

Similar buildings are to be found at most of the large towns, and at Arian, in Kutch, there are several devoted to rats, but one in particular was held in great esteem, and the creatures were maintained by means of the revenues of the town. It has been doubted whether any devotees ever really sacrificed themselves to these brutes; but at Barotchi, in 1853, the spectacle was really witnessed. A Brahmin had invited all his relations and acquaintances to meet him at one of these receptacles, without telling them his intentions. At the hour named, he arrived with his hands tied behind his back, and threw himself into the trench, to the great horror of those standing round.

The same evening after several hours of horrible sufferings, his body was reduced to a perfect skeleton.

Such are some of the most noted ways in which people have practised suicide in various parts of the habitable world, and still do, for there has been but little change in many ways.

It has been objected by a former critic of M. de Boismont's work, that the author had not sufficiently considered the analogy of suicide to *crime*, and the writer observed, "wherever crime is rife, self-destruction reigns." It seems to us such a generalization goes too far; it either means too much, or nothing at all. For what is the term "crime" to include? If it is extended to every deviation from a perfect moral standard, every indulgence of passion, anger, also hatred, malice, and all uncharitableness, are crimes, and exist everywhere; but if it be restricted to the ordinary usage, and means the social offences against one's neighbour, he would fain ask where is the happy spot in the world where any number of men are congregated where crime is *not* rife? Facts, moreover, disprove the assertion, for it is not among the most "criminal" class that suicide is the most common. It is rare among convicts, it is quite exceptional in prisons\* (where, indeed, there is every convenience for suicide

\* If suicide reigns where "crime is rife," we ought to expect it as much in the class of old offenders, among those punished for crime, and those who have before them the disagreeable prospect of long imprisonment, if not more than among those living in the pursuit of crime with the pleasing excitement of escaping detection.

According to the 'Judicial Statistics' for 1861, there were only six suicides (five men and a woman) in prisons in England and Wales during that year. The number of prisoners at the end of the year was 26,035, but a still larger number must have been admitted in the time.

In one of the best modern English prisons, with a daily average of 215 inmates, there have been six suicides in the last twelve years, and this is more than the proportion for the same period in most county prisons. The particulars of these six cases are as follows, so far as they could be obtained at some distance of time:—1. George G,—, æt. 44, called an "incorrigible rogue," hanged himself, a few minutes after dinner, while awaiting his trial, for no grave offence.

2. George A,—, æt. 29, an *insolvent debtor*, cut his throat with a razor in the night: was much excited on admission, and had been drinking hard just before.

3. William C. A,—, æt. 56, hanged himself three weeks after admission.

4. John M,—, æt. 34, had been several times in prison, and was sentenced to six years' penal servitude. Hanged himself a month afterwards. The act was supposed to be unpremeditated. He was extravagantly fond of his wife, who was a drunken and bad woman. He had defective palate.

5. William W,—, æt. 44, hanged himself while undergoing a nine months' sentence. This was supposed to be an insane act, though he had shown no previous signs of madness. It was found that there was a suicidal mania in the family, the father of deceased having thrown himself down a well, a sister having cut her throat, and another hanged herself.

6. Thomas J,—, æt. 16, under a short sentence for theft, hanged himself. This may have been imitative, as it occurred on the same day as the previous instance, and almost at the time of the excitement caused by the act. The boy was said to have been depressed ever since an attack of ague, lasting thirteen weeks in the previous year, and he had also had ague while in prison.

Cases 2, 5, and 6 were clearly pure instances of disease of the brain, of which

according to the cellular system), and does not obtain in any excess among the poorest or most degraded of society. The history of many illustrious suicides is quite inconsistent with the notion of any crime : what analogy to crime was there in the death of Lycurgus, before alluded to, or of the stoical philosophers, or, to take a modern instance and a type of a largish class, the suicide of the painter Haydon ? These were all deliberate acts, the first from a generous motive—a self-sacrifice for the public good,—the second from conviction, and the third from despair on the part of an overwrought, unfortunate, but well-principled man. As an abstract question, suicide may be said to be linked with crime, but practically it has but the slightest alliance. The same writer, after detailing the conditions which favour the production of suicide, says, “But is not this the condition necessary for crime in general?” Certainly ; but to enumerate the conditions favorable to crime is only to mention the conditions of modern civilised society, with a preference for its least favorable developments. If there is any one quality which conduces to suicide more than another, it is the exaggeration of selfishness ; but it is not so much in the individual as his surrounding circumstances that we must search for causes.

Mr. Buckle, in his ‘History of Civilisation,’ says, “It is surely an astonishing fact, that all the evidence we possess respecting it (*i. e.* suicide) points to one great conclusion, and can leave no doubt on our minds that suicide is merely the product of the general condition of society, and that the individual felon only carries into effect what is a necessary consequence of preceding circumstances.”

Those who may be unwilling to accept this dictum must, at least, acknowledge how needful it is to consider the force of external conditions as influencing the conduct of men. The great fault of the popular notion of suicide is the considering it as an isolated act, whereas it is the sum of many actions, the crisis of many antecedents. For this reason it seems absurd to talk of the “treatment” of suicide as though it were an entity to be taken separately, and cured like a broken bone. In order to treat a suicidal tendency it would be needful to study the life history of the individual, his temperament, his inherited tendencies, the conditions of his moral and physical existence ; but, instead of this, it is rather the fashion to rail at it as a wicked act demanding confession, penitence, and penance, or to call it a legal offence, to be compounded for by money or imprisonment ! We are convinced that as knowledge advances, the number of “reasonable” suicides will diminish to a vanishing quantity, and it will be more and more understood how impaired volition can be

suicide was a symptom, and most probably No. 4 also. Further investigation would very likely interpret the other two cases in the same way. Crime played quite a secondary part in these deaths, for they would not have occurred without the morbid condition of the brain, plus the hereditary tendencies.

as much a matter of disease as a delusion or a state of raving. But till some improvement takes place in knowledge, the ridiculous scenes which are at present enacted at our police courts will, we suppose, continue.

We would gladly notice other portions of M. de Boismont's book did our space allow, such, for instance, as the chapter on the "Medico-legal Aspects of Suicide," in which an interesting discussion on simulated suicides is illustrated by the famous case of Armand and Rout, tried in France, where a man was found in great peril of his life with his hands tied behind his back, who on recovering accused (falsely) his master of attempting to murder him. This work continues the authority on suicide, in all languages; it has no rival, and the care the author has bestowed on the revision of the second edition will maintain the position the book has already gained.

G. M. B.

*Autobiography of the late SIR BENJAMIN C. BRODIE, Bart.*

Longman and Co., 1865; pp. 187.

THE son of a rector, magistrate, and deputy-lieutenant, enjoying the intimate acquaintance of a leading whig lord; whose mother was the daughter of a wealthy banker, and inherited £10,000 soon after her marriage; whose aunt married Dr. Denman, and whose first cousins married Dr. Baillie and Sir Richard Croft, three eminent physicians in London; who, moreover, had an elder brother studying for the bar at Lincoln's Inn, as also a cousin; could not with reason deplore his fate when it was decided for him that he should leave his father's house to study in London for the medical profession. His education had been liberal; his training good. Accustomed to diligent exercise of his mind in the attainment of general knowledge under the tuition and guidance of his father, in London he would have to continue the same industry in acquiring special knowledge under the tuition and guidance of friends and relatives engaged in that profession to which he was about to belong. He would exchange a small domestic circle for a large one of friends and kindred less closely allied to him. He had hitherto encountered no great difficulties, and he had no reason to anticipate them in the future. Amongst medical worthies of every age there cannot be mentioned one who started on his career with such aids and advantages as Sir Benjamin Brodie possessed when he "first came as an adventurer to London." Position, power, and influence, were available on all occasions to promote his interests, and the best advice was always at hand to guide his every step. Had he been

possessed of ordinary talents failure was impossible; with his rare combination of admirable qualities, success was certain.

Success is always interesting to read about; the autobiography of a successful man being only eclipsed in interest by that of a great failure. The autobiographer is necessarily egotistic, and, to some extent, subjective; his opinions concerning himself, however, are valuable aids to a just criticism of him. For we see him as he saw himself, and we see him as he appears to us. As he acquaints us with his feelings in the details of life, and in the hard struggle how physically to exist, we see in these purely personal matters the real character of the man displayed more clearly than in his conduct before the world. Judging from Sir Benjamin Brodie's autobiography, we are inclined to consider prudence to have been his characteristic virtue; and his possession to such a degree of this eminently northern quality goes far to confirm the truth of his supposition that he was of Scottish origin. His frequent allusions to money matters; the very moderate demands he made on his father's "limited means;" and, after his father's death, his endeavours, by avoiding all extravagance, to live comfortably and keep up a respectable appearance on means less than those of many of his acquaintances, who were, notwithstanding, frequently in difficulties, manifest the economical and cautious cast of his mind. When he married, his income was £1530 a year, and his *naïve* remark that his wife and he "managed, by being careful as to their mode of living, to make both ends meet at the end of the year," and his reference to the considerable anxiety caused by his having an additional person to keep, are more calculated to create a smile than to excite sympathy with him in his distressing position. One may form an opinion of the magnitude of the trials, and the nature of the difficulties with which Sir Benjamin Brodie had to contend through life, when we find that to have to maintain a wife on £1530 a year, with brilliant future prospects, produced dyspepsia, which troubled him for two or three years. A rapidly increasing practice removed his anxieties, and cured his dyspepsia.

It must not be forgotten, however, that although Sir Benjamin Brodie had such a good start and so many helps on his way, half his success was due to his own industry, sobriety, tact, and good common sense. The exercise of the same solid qualities would have ensured success in whatever circumstances he had been placed at the outset of his career, but they never would have elevated him to the position which he occupied. Fortune was very kind to him, and he made the best use of her favour.

It was in the autumn of 1801 that young Brodie first came to London "to grope his way as well as he could by himself," in the profession for which he was destined. During his first winter he attended Abernethy's lectures on anatomy, of whom he speaks in

terms of the highest praise. His admiration for this distinguished teacher led him to follow his footsteps, and devote himself to pure surgery. In the dissecting-room he formed the acquaintance of Lawrence, even then a remarkable person. "From that time to the present," he says, "Lawrence and myself have been moving in parallel lines, he having had the largest share of private practice next to myself." And after criticising Lawrence as a writer, speaker, and thinker, he adds, "that he is thoroughly acquainted with his profession cannot be doubted, for it would not have been possible for him otherwise to retain for so long a period the high place which he has occupied." So widely different are such minds as those of Brodie and Lawrence, that we might, perhaps, as reasonably expect the former to sympathise with the genius of the latter, as the latter to appreciate at its full value the sagacious mediocrity of the former. We cannot agree with Sir Benjamin Brodie that an exact parallel, or, indeed, any parallel, can be drawn between him and Lawrence. That Brodie had the larger private practice is certain; that he possessed the qualifications which obtain practice in greater perfection, or with fewer drawbacks than Lawrence, may be admitted; but there can be no question that the latter has a higher order of mind, stands on a higher platform, and must be judged according to a different standard.

"Genius does what it must: talent what it can."

During his second winter in London, Brodie's professional studies were still, as in the first winter, limited to anatomy, except that by the advice of Dr. Baillie he attended a chemist's shop to gain some knowledge of *materia medica* and *pharmacy*. It was not until the spring of 1803 that he became connected with any hospital. He then entered as a pupil of Sir Everard Home (at that time Mr. Home), at St. George's Hospital. It was the good advice of Dr. Baillie which induced him to make himself a complete anatomist before he commenced the study of diseases in the hospital, and he found it of great advantage to him. In 1805 he was appointed house surgeon at St. George's, and his connection with Sir Everard Home was the beginning of his private practice, for that eminent surgeon proposed to him that he should take the place of his *protégé* Nicholson, who had hitherto assisted him, and who had now gone to India. About this period also Sir Everard Home introduced him to Sir Joseph Banks, president of the Royal Society, and that distinguished man invited him to the meetings which were held in his library on the Sunday evenings which intervened between the meetings of the Royal Society. There he met with visitors distinguished by their scientific reputation, the elder Herschel, Davy, Wollaston, and a host of others. This intimacy with these eminent men was of immense advantage to him; he himself says that they

treated him with much kindness and consideration, and he adds : “ I obtained a place in my profession which I could not have attained otherwise.”

In March, 1808, when only twenty-five years of age, through the interest of Sir Everard Home, Brodie was appointed assistant surgeon to St. George’s, and Sir Everard entrusted him very much with the management of his patients. Besides he was appointed, along with the other assistant surgeon, Mr. Robert Keate, to take charge of the patients of Mr. Gunning, the junior surgeon, who was attached to the staff of Lord Wellesley in the Peninsula, and to whom at that period an unlimited leave of absence had been granted in accordance with an old law of the hospital now done away with. Not long after this he obtained the sole management of these patients. Thus he had the opportunity at an unusually early age of acquiring a large experience in hospital practice, and to this circumstance he attributed much of his professional success. He devoted himself diligently to his hospital studies. He introduced the practice of giving clinical lectures, which gave him considerable reputation amongst the students of the hospital, and also served to make his own knowledge more clear and accurate, enabling him to express himself with greater facility and precision. About this time he began to think more seriously of private practice. He took a house at 22, Sackville Street, and for the first time placed his name upon the door. Owing to his reputation at the hospital, his connection with Sir Everard Home, and his intimacy with several Fellows of the Royal Society, and other men of high standing, he had no difficulty in at once obtaining practice, which yearly increased, until, free from anxiety concerning himself, he found time to pursue to some extent scientific studies. He was elected a Fellow of the Royal Society, and in 1810 he gave as the Croonian Lecture a paper on the ‘Influence of the Brain on the Action of the Heart, and the generation of Animal Heat,’ for which he was awarded the Copley medal, an honour never before obtained by so young a man. In the year 1813 he communicated a paper to the Medical and Chirurgical Society, under the title of ‘Pathological Researches respecting the Diseases of Joints,’ which was the foundation of the book which he afterwards published, ‘On Diseases of Joints,’ and which has gone through five editions. With these exceptions, Sir Benjamin Brodie has not contributed anything of importance to medical literature. About 1814 he became a regular visitor at Holland House, and was very intimate with Lord Holland up to the time of that nobleman’s death, and with Lady Holland afterwards. Holland House has in its time been of material assistance to several young men, and was doubtless of some advantage to a rising young surgeon of good reputation. In 1816, his professional income being £1530, Sir Benjamin Brodie ventured to marry. From that time he continued his unparalleled career of

prosperity, and his good fortune never left him, but carried him steadily on from one hour to another. He filled the office of serjeant surgeon, was made a baronet by Lord Melbourne, and reached the highest point in his profession.

Sir Benjamin Brodie's life was not an eventful one. The history of the most interesting part of it, from his commencement as a student in London to his marriage, if written by the most facile pen, would never be an exciting narrative. His life owes its interest, not to any remarkable freak of fortune for his special good, but to the unbroken series of favours which she so constantly bestowed upon him. He himself was in no way remarkable for any striking intellectual quality, but for an unusual combination of ordinary qualities. He is for this reason entitled to be considered a typical representative of the successful men of the world in all professions. He is an admirable pattern to any one who desires wealth, influence, and reputation—who wishes to be great in his *day* and *generation*. He worked very hard for the present, and the present abundantly rewarded him. He was essentially a man of the times, and with the times he is even now passing away. His character and his life were completely comprehensible by average intellect: the one embodied the cardinal virtues of prosperous men who object to selling themselves for lucre, but who equally object to cherishing any ideas which have not for their aim worldly success; the other is the best textbook for that part of the rising generation whose destiny it is to carry on the world's business. Patient and persevering, Sir Benjamin Brodie never wearied. Shrewd and sagacious, he avoided everything that could injure him in the estimation of the public. With considerable tact he stood well in society. Not so far gifted above his fellows as to have little in common with them, he had not to create an artificial sympathy with them and their views, and they saw no marked superiority in him that they should either envy or hate him.

The future will not remember him. His was not an universal mind. He was a practical man of the world, whose great object in early life was to attain unto a position in which he could keep himself, and after his marriage to accumulate a satisfactory fortune for his wife and children; and he fully succeeded in accomplishing his aim. And he has left behind him a short and interesting biography, the truthful nature of which some may well doubt, if they do not bear in mind that so exceptionally fortunate was Sir Benjamin Brodie's career that those circumstances which would be "trifles light as air" to ordinary mortals, were of the greatest moment to him, the sunshine of whose prosperity was never darkened by a single cloud.

W. M.

## PART III.—QUARTERLY REPORT ON THE PROGRESS OF PSYCHOLOGICAL MEDICINE.

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### I.—*Foreign Psychological Literature.*

By J. T. ARLIDGE, A.B. and M.B. Lond., M.R.C.P. Lond., &c.

*Annales Medico-Psychologiques.*—The third volume of the fourth series of this Journal contains the following original articles: ‘On the State of the Mind in Acute and Chronic Alcöolism,’ by Auguste Voisin; ‘On Amaurosis and the Inequality of the Pupils in progressive general Paralysis,’ by Dr. Billod; ‘Report on an Individual, named Franier, guilty of Murder,’ by Dagonet; a Medico-Legal Consultation in a Will Case,’ by Parchappe; ‘The Insane in relation to Society,’ by Bonnet; ‘The Treatment of Chronic Diarrhoea among the Insane,’ by Berthier; ‘The Interdiction of the Insane,’ by Caffe; ‘Report on an Individual accused of Violence with Criminal Intent,’ by Renaudin; ‘Tuberculosis and Insanity,’ by Clouston and Dumesnil; ‘The Proposed Asylums for the Department of the Seine,’ by Renaudin; and, ‘On the Organization of the Italian Asylums,’ by Brierre de Boismont.

Dr. Auguste Voisin commences his essay on the mental state in acute and chronic alcöolism by noting the alarming increase in late years of this malady. During the seven years he acted as *interne* to MM. Delasialve and Moreau (de Tours), that disorder was not half so common at the Bicêtre as at the present time. Moreover, it then presented itself in the acute and subacute forms, delirium tremens predominating; whilst on the other hand, maniacal delirium and chronic affections were uncommon. In 1856, 99 cases of alcöolism, and, in 1860, 207 such were admitted into the Bicêtre. From the police returns of Paris it appears that an average of 120 individuals every month are taken charge of by the police, on account of their state of helpless drunkenness in the public streets. This increase of intemperance is particularly due to the abuse of “absinthe;” but the brandy also supplied to the working classes is of wretched quality, and often manufactured from potato-spirit.

Dr. Voisin recognises two primary forms of alcöolism:—1. In which a tolerably sober individual who has never suffered with delirium tremens becomes attacked by mental disorder consecutively or not, as the case may be, to an attack of delirium tremens, as a

result of great excess during a brief time, or of the sudden privation of alcoholic stimulants. 2. Under the second form are included habitual drunkards, the subjects of one or more attacks of delirium tremens, and who may be looked upon as the victims of chronic alcöolism. Indeed, no individuals of this sort are free even when relieved from the acute delirium for which they have been especially treated, from some of the symptoms of chronic alcöolism, such as defective memory, enfeebled intelligence, and moral energy, diminished aptitude for their employment, and decreased muscular power. This second category admits of subdivision. One section comprises those in whom the disorder of actions and of words terminates after a time, never less than a month ; the other, those who are permanently incurable, and eventually become demented. Nevertheless, in the one as well as in the other section, chronic-alcöolism subsists.

Cases of acute delirium after simple excess or sudden deprivation of the accustomed stimulus are, in comparison to those of the second form, uncommon. Thus, during one year, there were but 4 of the former, and as many as 28 of the latter.

Three out of four of the cases of acute alcöolism exhibit mental depression with more or less stupor, hallucinations of a depressing character, and various delusions. These patients have little or no consciousness of their condition ; their will is inert ; their memory of past events at best much confused ; their reasoning powers and their social affections abolished ; with regard to their freedom of will and liberty of action, these patients may be considered as amongst the most irresponsible beings. Delirium tremens is not necessarily an antecedent of acute alcöolism. The essential characters of the disease are the transitory nature of its phenomena and the constancy of depressing ideas. The prevailing opinion is, that hallucinations are characteristic, yet Voisin finds them absent in one half of the cases. In the second form of the malady, active delirium attacks habitual drunkards, the victims of chronic alcöolism. In this variety melancholia and stupor are more pronounced. Of 10 such patients, 7 suffered with partial delirium of a melancholic type. The majority are insensible to their condition, and continue to be so for three weeks, more or less ; after which they demand, with some show of reason, to be allowed to quit the asylum, and again gradually recover their social and family feelings. The memory is more or less seriously deteriorated in almost all instances, but never abolished ; the reasoning powers much disturbed, giving rise to erroneous conceptions and interpretations of sensations and surrounding circumstances. The mind can be temporarily aroused from its stupor and painful broodings, but quickly relapses ; the will is much enfeebled, and the actions consequently marked by indecision and inconstancy. All the patients, save one, noticed by Dr. Cousin, suffered with hallucinations ; those of hearing occurring in 6, and those of sight

in 4. Visions of serpents and of animals happened in one case only; in the rest the visual hallucinations were of persons dead or alive, who annoyed the sufferers. The predominating delusions are those of persecution, of crime committed, and magnetic of influence.

The form of mental derangement in question seldom extends beyond two months. Recovery is the rule, but not a complete cure, for some symptoms of chronic alcöolism remain, such as diminished muscular power, lessened moral energy and capacity for work, decreased powers of conception, and particularly defective memory. Moreover, a relapse is readily induced by excess, by trouble or anxiety, or even by more or less entire abstinence from food and alcoholic liquors.

In three of his cases, Dr. Voisin encountered a condition of mind characterised by a feeling of satisfaction and self-pride, and by delusions of wealth and happiness, which he does not find noted in treatises on acute and chronic alcöolism, but which he looks upon as constituting a distinct variety of the disease. Two of these patients were brandy drinkers; the third indulged in "absinthe." All three had hallucinations of vision. The sentiments of delight and satisfaction were almost always in the ascendant, and if replaced by the painful impressions usual in the malady, it was but for a few seconds, and at considerable intervals. In one of the three individuals, no melancholic feelings at all had place.

No social or family affection ever entered their minds, and all sense of propriety of conduct was blotted out. One of these cases is reported to have recovered, and to continue well after an interval of two years; a second is sinking deeper into dementia; the third died, apparently in consequence of a large abscess of the thigh. Voisin asserts that such cases are essentially distinct from general paralysis. Thus one, as already noted, recovered; in the one who died, no lesions, such as are seen in general paralysis, were met with; and in the third, still uncured, the symptoms of general paralysis are absent.

Nevertheless, in two of them, on admission, trembling of the upper lip, hesitation, and once, indeed, interruption of speech, were met with, coupled with the peculiar air of satisfaction and contentment, and visions of wealth and happiness, encountered in general paralysis.

The second and concluding portion of Dr. A. Voisin's paper is published in the ensuing volume (vol. iv, 1864). The portion already briefly analysed is largely illustrated by cases; this second part possesses still more the character of a clinical report. Its subject is chronic alcöolism in which the disturbance of the intellectual and moral faculties is also chronic. Viewing this condition in relation to its frequent cause in France, the writer also speaks of it under the title of chronic absinthism.

Looked upon as a whole, the symptoms of chronic alcöolism are chiefly referable to the memory and to the moral faculties, particularly to the moral sense, to the social sentiment, and to the force and energy of character. Hallucinations by no means necessarily accompany the malady.

Simple amnesia (loss of memory) is among the most common results of excess in alcoholic drinks. It is rarely wanting, and goes along with stagnation of ideas, heaviness of expression and torpor. In other cases, the defect of memory is associated with difficulty of speech and stammering of the tongue, dependent, Dr. Voisin believes, on the defective memory and the hesitation for words and ideas, and not on muscular paralysis. The intellectual powers are more frequently deranged in the faculty of consciousness: the patients have no clear perception of their condition, of its cause, or of surrounding circumstances. Some assume great singularity of manner, more or less altered from the natural standard. Mental depression and melancholic ideas are among the most common symptoms, and concur with diminished physical and moral energy, and with torpidity. There is so great feebleness of character that such patients may be induced to engage in the most absurd or reprehensible actions. It is for the most part chiefly in asylums that we find the sufferers of chronic alcöolism to be also the prey of hallucinations; for these last form no necessary element in the disease, which, apart from them, is met with in numerous persons at large in society.

Intellectual stupor and brutishness are less common than the other varieties of mental disturbance in the disease in question. The latter Voisin conceives to be more frequent in absinthism, and to be particularly connected with copious serous effusion on the brain. Delirium of ambition with feelings of self-complacency and of pride is occasionally met with in chronic as well as in acute alcöolism, showing that this particular variety of delirium cannot be held pathognomonic of general paralysis, as several writers have represented it to be.

By way of appendix, Dr. Voisin enters on the consideration of the mental state of the victims of chronic alcöolism when suffering from acute maladies, such as pneumonia, pleurisy, rheumatic fever, erysipelas, &c. When delirium breaks out in such patients, it is usually attributed to metastasis, or to an actual extension of the acute disease to the brain. It presents, however, a typical character, as in the case of delirium tremens: the patients are seized with sudden terror, with imaginary fears, with ideas of being persecuted; with distressing hallucinations and illusions, along with continual agitation, tremors of the limbs, lips, and tongue. The body is bathed in perspiration; the countenance anxious and restless, and the sufferer makes attempts to escape the dangers he dreads. In

most instances, death follows the appearance of these symptoms, which it may further be remarked are more prone to occur when these patients have been bled.

One of the author's conclusions is, that absinthism, whether acute or chronic, is distinguished by no definite symptoms from alcöolism; though probably the mental disturbance, in the former, may be more profound and more lasting, and the reduction of the mind to a state of brutish imbecility more frequent.

Further, patients suffering from chronic alcöolism do not possess complete legal responsibility, inasmuch as all their faculties are liable to be more or less damaged by the disease, and thereby to deteriorate the perception of right and wrong. At the same time the doctrine of absolute irresponsibility is untenable.

Dr. Henry Bonnet's 'Essay on the relations of the Insane to Society,' commenced in the number of the journal for March, 1864, is continued in that for the November following, and is to be completed in a subsequent number. It is aptly placed by the editors in a section of the journal headed "Medico-Psychological generalities," for its character is of a very diffuse and general sort, and its readers will ardently desire to alight upon the principles to be illustrated, or the conclusions to be arrived at in its many pages. Certes, this is one fact, it does illustrate that the writer has an extensive knowledge of books, and can string quotations together. As for its teachings, the only lesson we have gathered from the perusal of its first portion is, that it is undesirable, both in the interests of the insane and in those of the public, that the former should be taken care of, and the latter protected from their vagaries and dangerous proclivities.

The treatment of chronic diarrhoea among the insane is the subject of a paper by M. Berthier. The mortality of the insane in the Bourg Asylum has progressively decreased from 54, in a population of 484; in 1857, to 25; in 1, of 569, in 1862; a result attributed by the writer to sanitary regimen and the good nursing received by the patients from the sisters of St. Joseph, the proprietors, managers, and nurses of the institution. The author remarks on the mortality prevailing particularly among the chronic inmates of an asylum from phthisis, and from a physical deterioration indicated in some by diarrhoea, in others by erythema, or wasting fever; in others by tumours of the ear, thrombus of the vulva, œdema of the eyelids, and anasarca, occurring singly, or several conjointly. Diarrhoea is one of the most common among them, and is, in M. Berthier's opinion, of a peculiar character, special in relation to its causes, and special also in its consequences,—a malady *sui generis*. It owes its origin in debility, and ends in debility. It is connected on one hand with the grouping of a number of individuals in the same building,

and on the other with the peculiar condition of the insane, then cachexiae, and then diathesis. A peculiar constitutional state develops itself as the powers of life fail, in consequence of defective innervation.

The treatment adopted varies somewhat according to the condition subsisting. If the tongue, abdomen, and pulse indicate ever so little reaction, a bland, simple diet, the best hygienic surroundings, and starch enemata, suffice. If the tongue be loaded, and the stools are bilious or mucous, some gentle laxative is superadded. So soon as the tongue is clean, the pulse natural, the belly painless, the stools simply diarrheic, and the appetite good, tonic regimen is adopted; pure wine, coffee, roasted meat, minced, or chops. This plan M. Berthier pursues for a month or even two. He allows gentle walking exercise out-doors, and insists on well-ventilated apartments exposed to direct sunshine. Vegetables are interdicted.

Of 21 insane labouring under chronic diarrhoea, 10 were cured, 7 relieved, 3 died, and 1 remained uncured. One of the three deaths was really due to phthisis. Of those in whom the cure was not permanent, one was an epileptic, who relapsed after each fit; another was a woman having paroxysms of maniacal excitement, interrupting the treatment; and three others were but a short time under treatment of those cured; some had been ill several months or a year, and two of them during two years. In a final note, M. Berthier announces that several who had resisted treatment when his report was sent in, have since yielded to it, and perfectly recovered. He also agrees with M. Girard de Cailleux in attributing the prevalence of diarrhoea, in a great extent, to the introduction of legumes too largely into the diet of asylums, coupled with over-crowding and defective hygienic conditions.

In some few cases first treated by him he administered pills composed of alum and nitrate of silver; but latterly, he has laid aside all drugs, which he says act only as poisons, and trusts entirely to the animal diet, pure wine, and sanitary measures. In 1855, he had 16 deaths from diarrhoea, and in 1862, under the altered treatment, only 2.

The conclusions of Dr. Caffe respecting the "Interdiction of Insane Persons," whereby the legality of all their actions is annulled, are:—that no interdiction should be pronounced except after the most rigid and minute precautions have been taken by the magistrate aided by competent medical men. The inquiries and interrogatories should be repeated again and again, not only before the court, but also at the patient's residence. Where possible, the appointment of a judicial council, which shall leave the individual free to dispose of his estates by will, is preferable to interdiction. That it is desirable to avoid altogether, or to postpone as long as possible, the

removal of the patient to a special asylum for the insane. For, he asserts, despair almost always takes possession of those removed to such institutions ; whilst the mortality is greater and the recoveries fewer among lunatics in asylums than among those not confined. Hence, the patient should be entrusted to the care of his family and friends whenever possible, and when no danger threatened the individual himself or society at large.

Few physicians in this country will, we believe, be found to endorse the opinions arrived at by Dr. Caffe. He appears to view an asylum as an unmitigated evil, and the interdiction of the social and legal rights of a lunatic as a scarcely allowable proceeding. No people can be more jealous than the English of any infraction of their legal privileges ; still the necessity of restraining insane individuals, and of depriving them of liberty that is likely to be abused to the detriment of their own well-being, their own property, or of the happiness and interest of others connected with them, is clearly recognised on all hands. Dr. Caffe is but one of several, in France, headed by M. H. de Castelnau, who have adopted these extreme views relative to the legal restraint and disqualifications of the insane.

The paper on ‘Tuberculosis and Insanity’ is a translation, by Dr. Dumesnil, of Dr. Clouston’s essay, with which our readers are familiar.

M. Renaudin, in his contribution on the projected ‘Asylums for the Department of the Insane,’ reappears as a decided opponent to all plans based on that of Gheel, for undertaking the charge of lunatics in what have been termed agricultural colonies. Hence, he regards the decision of the Prefet of the Seine to institute several new asylums on the ordinary model as a triumph over the opponents of such “closed” establishments. He maintains that work,—agricultural labour being principally in view—can neither be the object nor the exclusive principle of a lunatic asylum, although it be an essential element in its hygiene and organization. All the treatment required cannot be comprised in it alone. Medical considerations must determine when, what sort, and how far labour may be resorted to, and a medical man is absolutely necessary as the superintendent of an asylum.

Viewing the necessity of instruction in mental diseases, M. Renaudin rejoices at the establishment of a clinical asylum at the old farm of St. Anne, for many years an *annexe* to the Bicêtre. It will contain five sections for each sex, and constitute one of the several asylums projected for the accommodation of the six thousand lunatics belonging to the Department. It is intended primarily for recent cases, and will resemble in character the “quarter for obser-

vation," or the receiving wards of the ordinary asylums and the general infirmary. The sites of two other asylums are settled: one near Neuilly-sur-Marne, the other near Epinay, on the road to Orléans. In the plan of these establishments it is proposed to construct a principal building, possessing the usual arrangements of asylums, and to surround it at varying distances with auxiliary buildings, so as to admit of a wider classification of patients according to their condition, their habits, and their employments.

An estimate has been made that, for 1500 patients,—the fourth of the number to be provided for—fifteen million francs (£600,000) will be required.

M. Brierre de Boismont returns to the examination of the 'Organisation of the Institutions for the Insane in Italy.' The general result arrived at, after his former visit to these establishments, was, that not one of them was a satisfactory asylum for the insane. He now considers that the Italian government should at once take steps to remedy that undesirable state of things. A scheme for an asylum at Milan has been drawn up, to provide for 500 lunatics, but in fact, there are at least 1000 requiring asylum accommodation belonging to that city and its vicinity.

M. de Boismont regrets much the want of concord and the jealousies subsisting among those concerned in maturing and carrying out the necessary projects; and he rightly denounces the prevailing spirit of hostility against the medical profession in Italy, and the folly of entrusting the government and construction of asylums to commissions from which all medical men are purposely excluded. Professor Bonacossa ventured to object to the appropriation of an old convent for a new asylum, at Turin, as a structure totally unfitted for the purpose; but his opinion was entirely ignored, and the most objectionable scheme confirmed by the non-medical commission.

The first thing to be done, says M. de Boismont, is, the enactment of a law to protect the insane and asylum physicians; and the next, the appointment of inspectors to examine and report on the condition, the management, and the wants of existing asylums, and on the plans for new ones, and to watch over the welfare of the inmates.

During his visit last year to Italy, he witnessed great improvements, and in places where he least looked for them. He particularly alludes to those carried out at St. Servolo, in Venice, and at La Lungara, in Rome. Considerable space for agricultural purposes had been added to the former, and several new workshops built. At the Roman asylum, where 500 lunatics are confined, various structural improvements had been effected; among which several new and most excellent baths are mentioned. But besides this, a covered corridor had been erected to connect the asylum with

the ramparts of the city, by which above four hectares of land are secured for the exercise and employment of the patients, commanding most delightful views, and readily extended at a future time. Workshops and a laundry are also in course of erection; whilst the women, instead of being shut up within their rooms as of old, are allowed free access to courts planted with trees, and surrounded by covered cloisters.

Volume IV contains original articles by Dagonet, 'On an Amelioration introduced in the Management of Dirty Patients, at the Stephansfeld Asylum'; by Tissot, 'On the Inner (*intinse*) Sense and the Vital Sense'; by Berthier, 'On Ptyalism among the Insane'; by Parchappe, 'On the Question of Interdiction'; by Castle, 'A Psychological Analysis of Courage'; by Grainger Steward and Dumesnil, 'On Hereditary Madness'; and by Auzony, 'On Farm Asylums, or the Colonization of the Insane.' Besides these, we have the continuations of the memoirs of Voisin and Bonnet, as already noticed, and four Medico-legal Reports on criminals under trial.

In his paper 'On the Management of Dirty Patients in Asylums,' Dagonet states his conviction that there will always exist a larger or smaller number of paralytics in whose behalf special care and appliances and special wards will be needed. He looks upon the plan of arousing patients three or four times in the course of the night, to attend to their wants, as a useless proceeding, particularly in cases where the incontinence is permanent, as an undue tax upon attendants, who also cannot be relied on to perform the task, and as a positive cruelty inflicted upon the unfortunate paralytics themselves, detrimental to their well-being by robbing them of their sleep.

He objects to placing wet patients on straw, or on the *zostera*, enclosed in bags, so that the wet portion may be removed daily, and replaced by fresh; inasmuch as it is next to impossible to accurately and entirely separate the soiled from the dry matter. The construction of the bed in three segments, so that the central wetted portion may be taken away separately, is also objected to on account of the trouble involved. Moreover, besides the difficulty of preserving all such beds in clean condition, the beds themselves are hard and prone to produce sores, or erythema and troublesome pustules. Impressed with the defects of all these, as well as other forms of beds invented for the dirty patients, he has sought to contrive an improvement upon them.

All his patients, without exception, now sleep on good hair mattresses; drawers beneath the beds, and other special contrivances, have been removed, and the troublesome frequent changing of straw or other substances filling the beds has been obviated. This has been effected by employing a sheet, covered on each side with india-rubber and furnished with a tube which passes through a hole in the

bed beneath, and allows the liquid running through it to collect in a glazed vessel beneath. Under the patient is placed an ordinary sheet, lying upon the water-proof covering. The last is prepared in the asylum. Since he has resorted to this plan, Dr. Dagonet has not found the patients suffer from excoriations, erythema, or other similar annoying and painful maladies.

This plan is by no means new to English asylum superintendents; and provided no impediment occurs to the collection and running off of the urine at the proper place, it is one of considerable utility. The difficulties in the way of obtaining attendants who will attend to their patients during the night are, in our opinion, exaggerated by Dr. Dagonet. The use of any such contrivance as the impervious sheet described, or any other that provides for the escape of the urine without heed from attendants or any trouble to them during the night, has the disadvantage of encouraging indifference and indolence on their part, and, as a result, the multiplication of wet patients. A sheet and tube will be valuable, in certain cases, where the removal or the getting up of patients is contra-indicated by their condition; but such cases are few in number. On the other hand, the disturbance of patients during the night to pass water is less felt than M. Dagonet supposes, and after perseverance for some time with the plan, the dirty habits are overcome; particularly when care is taken to get the bladder relieved on retiring to rest.

*The internal (intime) sense and the vital sense*, or vital consciousness, is the subject of a metaphysical essay by M. Tissot, Dean of the Faculty of Literature at Dijon. The term "internal sense" is used as synonymous with consciousness, and the conclusions sought to be established are: 1, that the "internal sense" is essentially different from sensation as commonly understood, as also from the vital sense, which is simply a variety of sensation; 2, that the vital sense was recognised and described under the name of "the sense of coexistence of the body" in the eighteenth century; and 3, that the vital sense, far from giving the idea of the individual material body, involves the supposition of its existence. The reader partial to pure psychology is referred to the memoir itself for the reasoning whereby the writer seeks to substantiate his conclusions.

*On Ptyalism among the Insane* is the subject of a short paper by Dr. Berthier. He commences it by remarking on the maladies with which an abnormally increased flow of saliva is associated, and on the common feature prevailing among them in excited nervous influence. Three chief causes are recognised as obtaining among the insane: 1, excitement; 2, hallucinations; 3, gastric disorders.

Of twenty lunatics presenting an unusual discharge of saliva by spitting or otherwise, eight suffered with mania or melancholia, with occasional exacerbations. Three of them exhibited the condition only during such periods of excitement. Again, six others were the prey of hallucinations or of illusions of the sense of taste, which compelled them to rid themselves of the nauseous or poisoned liquids. Four others complained of ruined health, of debility, or of gastralgia, and were pale, lean, and anaemic. The rest were victims of dementia, incapable of attributing the habit of spitting to any definite cause.

The continued habit of spitting, and oftentimes the quantity of salivary fluid expelled, proves not only disgusting, but leads to imperfect insalivation of the food, difficult swallowing, and imperfect primary digestion, with its consequences, dyspepsia, acidity of stomach, and wasting.

Ptyalism among the insane, particularly among old cases, arrests unfortunately, as Dr. Berthier remarks, little attention, and is generally regarded as an annoyance and evil to be endured and not to be cured. Gargles, washes for the mouth, and external inunctions, are felt to be ineffectual, and are rarely resorted to.

However, Dr. Berthier assures us that he has found a plan of curing this troublesome condition, to which he was led in a great measure accidentally. An incoherent, chattering female lunatic, exhausted by constant spitting, was on her admission into the asylum placed upon tonic regimen—consisting of meat daily, with the exception of Friday, a potion of wine after each meal, and coffee according to rule. Two months afterwards, not only was her general health restored, but she had given up her injurious and offensive habit of spitting. Struck with this result, Dr. Berthier submitted twenty females guilty of the same habit to a like treatment. Of these, four in whom the infirmity was dependent on organic debility were cured. Three maniacal cases ceased to expectorate except during paroxysms of excitement; with six subjects of hallucination the treatment failed until effusions and the douche were superadded, when the habit was finally overcome. By degrees the spittoons in the asylum have been entirely set aside.

The writer sums up thus: Chronic ptyalism among the insane depends, 1, on atony of the primæ viæ, and may then be overcome by substantial, tonic regimen; 2, on sensory hallucinations, when it must be combated by moral measures; 3, on general excitement, when it must be treated by sedatives and antispasmodics, as indicated in mania. This last form is the most rebellious, because it constitutes an inherent element in the principal malady. The two former are readily curable in course of time. Dr. Berthier deserves much praise for his efforts to ameliorate the condition of chronic lunatics, who too frequently, particularly in gigantic asylums of ma-

gisterial proportions, are let live a vegetable sort of existence, recognised as entities to be fed and clothed, and, when dead, to be duly reported. If such spit about and have other disagreeable ways, they must be separated and constituted into a separate and disagreeable community, in which evil habits are tolerable and tolerated until death leaves only the unoffending carcase to be disposed of by the contracting undertaker. However, Dr. Berthier's paper addresses itself to those who can personally know, watch, and provide for their unfortunate incurables, and such superintendents will be willing to try the simple means of remedy for chronic diarrhoea and ptyalism which that physician has suggested. It will not be fair to him to direct attendants to carry out the plans; if the trial of them is to be fair, it must be made by the medical men themselves. The plans are simple, and the results, if attainable, as they are represented to be, most desirable.

The *Question d'Interdiction* by M. Parchappe is the report of an inquiry respecting the mental state of a lady who was eventually placed under interdiction. The proceeding mainly resembles our English commission *de lunatico inquirendo*, under the direction of a master in lunacy, aided by affidavits from medical men and others.

Dr. Dumesnil has further sought to bring the results of English experience in the pathology of insanity before his countrymen, by translating Dr. Grainger Stewart's excellent essay on 'Hereditary Insanity,' which appeared in the pages of this Journal in April, 1864.

At the conclusion of the translation Dumesnil subjoins the following extracts from his report of the Quatre-Mares Asylum, bearing on the subject of Dr. Stewart's essay :

"I have, as usual, sought with the greatest care to ascertain the existence of hereditary tendencies. In 28 out of 180 patients admitted, I have failed to obtain any information on the subject. In 155, on the other hand, my efforts have been attended with success. In 53 cases, that is, in one third of the whole number, heredity has been discovered. In 49 instances there was direct predisposition; a grandsire, the father or the mother, the brothers or sisters, the uncles or the aunts, having been insane, or epileptic, or idiotic. In 4 patients insanity was traceable in a collateral line, among cousins or their offspring. Among those in whose history no heredity could be made out, I found that four had one, or several children, who were insane."

*On Farm Asylums, or the Colonisation of the Insane*, is the subject of a communication addressed to the Prefet by Dr. Auzouy, the director of the Pau Asylum, and of the Agricultural Colony of St. Luke, an *annexe* of the asylum.

In prosecuting the system of agricultural colonisation at the St.

Luke *annexe*, and whilst keeping its successful and profitable operation in view, M. Auzouy has never allowed labour to be thrust upon his patients, but has always personally consulted what they could and what they would do. Twenty-three patients are employed at this farm, and whenever repugnance has been shown to labour on the part of any one of them, there have always been many volunteers from the asylum to supply his place. He professes misgivings relative to securing 75 of every 100 patients in an asylum (a proportion reported to be obtained in some establishments), for agricultural work. His experience of what can be attained where work is voluntary and regulated by the ability of patients is opposed to such a result. Inducement, rewards, example, and encouragement, will effect great things in getting work done. The places for patients at St. Luke's *annexe* are occupied in turn, so that an average of 45 are employed there. If this number be added to 25 employed in workshops, it gives a total of some 70 men out of 190 in the asylum industrially engaged. As an exceptional circumstance only are any women employed at St. Luke's, but this institution is made useful to the female patients generally as the object of a walk, and a means of diversion for the mind.

Dr. Auzouy argues against the somewhat popular objections against asylums as prison-houses and places of restraint by reason of their construction, their walls, and their rules for security, and assents cordially to Esquirol's dictum, that "a well-organized asylum is a powerful instrument for the recovery of the insane." He recognises a valuable means of treatment in effective classification. To bring about regularity in actions is a stage towards securing a regularity of ideas. The influence of an orderly, quiet abode operates beneficially in certain cases of madness. Hence, he regards a pell-mell commingling of patients in an asylum as a great evil, often inimical to recovery as well as to good management.

Again, whilst agreeing with M. Billod in the desirability of extending agricultural operations among the insane by a sort of colonisation in order to cover some of the expenditure on asylum maintenance, he cannot go along with that physician in his plan of so extending such operations as to entirely cover the cost and even to produce a profit by the labour of lunatics. Such a scheme savours of injustice to the inmates of asylums, considered as sick folk professedly under care and treatment. How ready some individuals, who would, perhaps, style themselves practical men, are to turn the insane to a profitable account, is instanced in the proposition recorded by M. Auzouy to have been made by a member of the Council of the Department to which Pau Asylum belongs: viz., that the proceeds to be obtained by the labour of the Junatics should be made use of to supplement the funds necessary to maintain the public roads of the department!

Further, M. Auzouy shows that a limitation of the space allotted to the labour of patients is demanded as well from considerations of profit and expedience as from those of the interests of the patients themselves.

The next question discussed is the possible application of any rational treatment in the cure of insanity. This he answers affirmatively, contending that medical experience, examination, and oversight, are wanted in all cases; that no single or uniform scheme of management is available to all; and that occupation is only one of several means of treatment, and, as such, requires to be regulated and ordered by medical authority.

An abstract of the accounts of the farm of St. Luke during 1863 shows a profit in the year of just upon 7000 francs (£280); the farm consisting of 20 hectares. Whilst fully recognising the manifold advantages of an agricultural colony as an increase to an asylum, M. Auzouy points out the following drawbacks to the plan:—  
1. The inherent difficulties arising from the multiplied relations involved in a semi-distinct institution, obtaining its supplies of food, its stores, its auxiliary labourers, &c., from the principal establishment.  
2. The too frequent contact of patients and attendants with people outside, and the danger, to some extent, of relaxation of discipline on that account.  
3. The insufficiency of supervision under whatever precautions are adopted.  
4. The impossibility of employing the two sexes together at the rural *annexe* without risk to morality.  
5. The complete denial to the refractory and the infirm of labour that might be useful to them.  
6. An antagonism or jealousy between the workpeople at the asylum and those at the farm, on account of the greater liberty allowed the latter. These and many other disadvantages, shown by practical experience, attend the establishment of a farm separated from an asylum, and the inference aimed at is, that the agricultural operations should be carried on in the immediate vicinity of the asylum. As a practical commentary upon this conclusion, the old asylum at Pau is to be given up, and a new building erected on the farm on St. Luke.

M. Auzouy relieves an irritated mind by discharging the following small shaft at some English asylums:—"Never in France have I been kept, as I have been in the English asylums I have visited, waiting half an hour before I could see the wards. I would not suspect the good faith of my neighbours on the other side of the channel, relative to their honesty in the matter of non-restraint, but nothing could have been easier, during the half hour's delay in the waiting-room, than to remove out of sight any camisoles that some unlucky exceptional patient might need, and thus to save the *amour propre* of the English in the eyes of his French colleague in respect to the particular practice named."

If it were not just to suspect the superintendents guilty of such a paltry imposition, it was not right on M. Auzouy's part to make the

insinuation; our own experience in visiting both British and foreign asylums is, that such delays must ever and anon occur; for it must be borne in mind that asylum superintendents cannot always be at hand to conduct casual visitors through the wards, and that time must often be lost in searching for the physician who may conduct the visitor through the institution, or who may delegate that duty to some other official if himself prevented. Bethlem and Colney Hatch were unhappy examples of English asylums for M. Auzouy to select for his visit. Of neither of these can an English psychological physician be proud, and, to save his national *amour propre*, he would assuredly propose to the foreign visitor other asylums that more truly represent the national convictions as to what such institutions should be.

Moreover, M. Auzouy should have recalled to mind, before venturing on insinuating the want of a straightforward honesty on the part of British asylum superintendents, the fact that the asylums of this country have been thrown open to the asylum physicians of other countries for their inspection at all hours while they might choose to tarry as guests of their medical officers; and that several, among whom M. Morel, of Rouen, may be named, have availed themselves of the privilege, and have narrowly investigated all the details of management at their leisure.

In conclusion, we would advise M. Auzouy to repeat his visit to England, and to take time to make himself acquainted with the medical officers of the asylums, and so to acquire a more just appreciation of their character, and of the manner in which they discharge their duties to the patients under their care. By so doing he will feel gratified also in seeing his plan of asylums surrounded by open fields, kept in the highest state of cultivation by the labour of their inmates, in full and profitable operation at most of our English institutions for the insane.

In this notice of the two volumes of the 'Annales Medico-Psychologiques, for 1864' we have restricted our analysis to the original memoirs contained in them. But besides these memoirs, these volumes contain abstracts of papers appearing in other journals, reviews of new books and of the proceedings of societies, and lengthened records of the papers and discussions at the Medico-Psychological Society of Paris, from most of which extracts might be advantageously made. Our limited space, however, forbids.

*De la Médecine Morale dans le traitement des Maladies Nerveuses,*  
par A. Paidoleau, M.D. Paris: pp. 256.

This essay on the advantages of moral treatment for the insane gained a prize at the Imperial Academy of Medicine. It is a pains-taking production, but cannot challenge attention by any originality or novelty of views, or by the records of large personal experience

on the part of its author. Like too many French works, it is very diffuse in its style, whilst the practical conclusions which alone would be appreciated by medical men engaged in the treatment of the insane, might be compressed within the space of half-a-dozen pages. It largely abounds in quotations from various well-known writers on insanity, and many of its illustrative cases are derived from the same sources.

It is too much the habit of foreign writers to be exhaustive in their treatment of a subject; and just as our old historians thought it necessary, in writing a history of England, to commence with that of the world since its creation, so does M. Paidoleau begin his work by a general dissertation on the dual nature of man, his spiritual and material essences; on the errors of materialism, and the necessary existence of an immortal part, as proved by dreams, &c. Continuing in the same direction, he reviews the physiology of the nervous system, and accepts the doctrine of a self-existent entity—the vital force. But in all the pages so occupied he is but repeating doctrines enunciated by Haller, John Hunter, and various other physiologists of a bygone period, and by no means gives an adequate sketch of the nerve-physiology and mental philosophy of the present day.

After an attempt to demonstrate that nervous disorders exist *per se*, without organic change, in which he loses sight of the homology between the nervous and electric forces, he proceeds, in chapter iv., to show the importance of etiology in comprehending nervous disorders, and also of a correct appreciation of moral causes as productive of nervous maladies. This he seeks to do by examples collected from various authors.

This division of his subject he sums up in the ensuing paragraph:—“By neglecting to trace backwards phenomena to the vital force,—a primary fact and a primordial law of the organism,—many physicians have adopted as a point of departure a secondary fact, such as the existence of irritability or of organic lesions, to explain them. Hence they have referred abnormal nervous conditions, at one time, to a lesion of the spinal cord, at another to local irritation, at another to anaemia; in other words, instead of to the correct, fundamental cause, perverted innervation, or a faulty faculty of sensation.” Dr. Paidoleau might well be asked, what is this ethereal something which he calls innervation, and how can he demonstrate it as something independent of structural conditions capable of diseased action. The progress of nerve physiology tends daily to diminish the number of disorders attributed formerly, in the absence of definite knowledge, to an impalpable something called disordered innervation; and the collection of ancient cases of nervous maladies made by M. Paidoleau to prove the existence of such without organic change, is valueless for the purpose; for they either are only assumed to be such cases of simple disturbed innervation by reason of their

recovery under moral influences, or, if death has ensued, were concluded to be so, because by crude anatomical examination, without the use of the microscope or other modern means of searching out diseased structure, no alterations were found which, according to the prevailing physiology of the day, were held to explain the symptoms present during life. We would commend to Dr. Paidoleau's study the papers by Dr. Beale on the minute distribution of nerves, Brown-Séquard's and Van der Kolk's physiological researches, and Mr. Lockhart Clarke's investigations of disease of the spinal cord and nerves.

It would be to misspend time and space to introduce an analysis of the author's chapters on the applicability and utility of moral treatment for insane and nervous persons; for the fact is admitted on all hands in this country, and is illustrated in every well-conducted asylum. However, any of our readers having an avidity for reading may gratify it in the perusal of the work under notice, and discover in it "sensation" cases of moral influence which may either gratify or amuse their minds.

*Journal de Médecine Mentale.*—This monthly journal is still kept up under the editorship of Dr. Delasiauve. Its contents are very varied; and as its dimensions (three sheets monthly) are limited, longer essays are continued as serial papers in succeeding numbers. Thus, in the fourth volume for 1864, the essay, commenced in 1863, on the various forms of mental disorder, by the editor, is continued in monthly portions throughout the year. Again, the Historical Studies on mental disease in ancient times, by M. Semelaigne, are resumed in this fourth volume, and continued in the several sections for the first five months of the year. In like manner Dr. Delasiauve proceeds monthly with his analysis of the discussions at the Medico-Psychological Society on partial responsibility in insanity. Dr. Casimir Pinel contributes a short communication on lunatic asylums in relation to the law of 1838, suggested by the publication of certain newspaper articles on imaginary abuses prevailing in asylums.

Dr. Marcé contributes a paper, in two monthly parts, on the value of the writings of the insane in relation to semeiology and legal medicine. Dr. Belhomme sends a brief communication, in continuation of a preceding one, on the "vital node," and a paper on the Education of Idiots. M. Semelaigne contributes a third portion of his essay on "the differential characters of pathological error," the two previous portions having been published in the third volume of the Journal, and also a notice of the delirium of patients who imitate the barking of dogs. M. Berthier is the author of papers on the conjunctivitis of maniacal patients; on placing the insane in cells; on music and madness, and on the question of the discharge of patients. M. Bourneville discusses the question whether Socrates

was mad, and has since republished it in the form of a pamphlet. Lastly, M. Benedict Gallet de Kulture presents a notice of the insufficiency of education in the Argentine Confederation. Such is a list of the chief original matter in the fourth volume of the 'Journal de Médecine Mentale.' The July number has unfortunately not reached us, and consequently an inventory of its contents cannot be supplied.

But besides the more original contributions, the Journal contains summaries and analyses of books and papers appearing elsewhere, together with miscellaneous matters relative to asylums and their officers, and to the scientific societies of France, when any subject bearing on psychological medicine is under consideration.

M. Berthier has, since his attention has been directed to the subject, observed congestion, or some degree of inflammation of the conjunctiva, in forty chronic lunatics, of the two sexes, mostly in connection with intermittent mania, at times in melancholia with periods of excitement, but never in the calm and continuous varieties of madness. His conclusions are, that there is a special variety of ophthalmia prevalent among the insane; that this affection, though at first resembling ordinary irritation, becomes incurable by its persistence; that it is associated with a form of congestion *sui generis*, together with which it both appears and disappears; and that in cases of simulated insanity, the presence of this sign may be valuable as diagnostic of delirium.

*On the Confinement of the Insane in Cells.*—M. Berthier remarks that there are three things to be weighed in estimating the excellence of an asylum—the number of its dirty cases, that of its deaths, and that of its cells.

The cell he looks upon as unfortunately a necessary element in asylum construction. It is to be used not as a punishment, but as a remedy. Unluckily M. Berthier cannot restrict himself to enunciating such excellent doctrine and his own practical opinions, but is betrayed into an attack on English asylums, and that marvellous bugbear to most foreigners, non-restraint. Thus we hear from him that non-restraint necessitates cellular confinement, which is the substitute for chains, for the muscular control exercised by attendants, for the camisole and the restraint chair. Hanwell, as in many other similar instances of misconception among foreign physicians, is here again answerable for M. Berthier's notions of what an English asylum is in structure and management. Because single rooms are so abundant it is presumed that they are all and always in use; that their inmates are pretty constantly confined within their limited space; and for the like reason it appears to be concluded that cellular restraint is a prevailing feature in English asylums, approved of by their superintendents. It will be a happy day in the history of the enlightenment of the minds of foreign psychological physicians

when these cease to write about practices in English asylums about which they are in complete ignorance. We imagine it must be that dreadful sea passage across the English Channel which is the cause of French asylum physicians generally not seeing for themselves what British asylums actually are, and what are the modes of treatment really pursued in them.

The *Delirium of Barkers* is viewed by Dr. Semelaigne as a strange neurosis, a sort of pneumo-laryngeal chorea, giving origin to the dog-like noises. It is mostly associated with various convulsive states, or with disordered intellect, or otherwise is the expression of diseased impressions. It has been known to spread, like other nervous disorders, by a sort of contagion among several members of a family, principally in the case of children, and in the wards of children's hospitals. However, the writer of the paper has collected numerous historic examples of the prevalence of this extraordinary disorder in a contagious manner among the members of various communities, including both young and old; and he thinks the term cynanthrope to designate the delusion of transformation into a dog may be invented and used on the same footing as the word lycanthrope.

M. Berthier's article on music and madness is brief but instructive. He examines music as "a physical agent," and as a complex agent, and discusses the questions, "May music be indiscriminately prescribed?" and "Under what circumstances is music indicated?" The former of these two questions is, as a matter of course, answered in the negative. To determine the matter raised in the latter question is more difficult. The various influence of music being recognised, it remains to discover the character of the music applicable to the particular form of disease. In mania music is seldom indeed beneficial, and need be soft, of slow movement, and calming, and not too near. On the contrary, in melancholia, quick, cheerful music is desirable; except, indeed, at first, whilst the disease is advancing, when commonly music is found to be irritating; where the mind is in a state of stupor it may be aroused also by lively airs, which may in such cases be played more vigorously. In monomania it is only applicable exceptionally, and need be adapted to the peculiar phase of mind. In some cases of the sort it serves indeed to break the chain of their reverie. The writer advocates the cultivation of music among the inmates of asylums, not, however, to be indiscriminately enforced on all.

The contribution of M. Berthier on the relations of the insane in asylums to the outer world, and on their discharge, presents a sketch of the good or ill consequences to be anticipated by bringing patients into contact with persons and scenes external to the asylum; by allowing the visits of friends or others to them; by permitting

letter writing ; and lastly, by discharging them from confinement by way of trial or as recovered. In his remarks on these several matters he points out also the circumstances which should regulate them, and adds cases in illustration. It is a very good paper, but difficult to make an abstract of. Moreover, there is no novelty in its teachings, for they are such as the management of an asylum will speedily impress upon any physician who undertakes it. At the same time they are worthy the attention of the inexperienced.

M. Bourneville puts the question—was Socrates mad ? argues it through fourteen pages, and, in opposition to M. Lelut (who some time since showed an equal concern in the mental condition of the old Greek), comes to the conclusion that he was not a lunatic. Thus do doctors disagree. For our part we are content to abide by the general opinion impressed upon us in our earlier years as the testimony of certain Greek friends of the philosopher, and which was current in our school-books, that Socrates was a wise man and “nae foo.” Doubtless he had some odd notions, did some odd things, like all others of mortal mould ; held some odd superstitions gathered by him in his nursery, was deficient in the philosophy of the nineteenth century, and did not, to avoid the consequences of its application to himself, always keep before his mental vision the psychological argumentation which, in this enlightened age, is so vigorously worked in analysing the mental condition of every individual who unhappily attains sufficient eminence to attract it towards himself, as a poet, philosopher, thief or murderer. But unless some of our dinner-table medium rappers can call him from the shades, by a writ “De lunatico inquirendo,” so that MM. Lelut and Bourneville may satisfactorily examine him, we fear the brief record of his life, as handed down by his contemporaries, will fail in details to permanently settle the question ; we would therefore suggest a truce between those disputants, and the desirability of letting the question and its subject rest in peace.

R. J. P.

## II.—*English Psychological Literature.*

*On the Method of the Study of Mind : an Introductory Chapter to a Physiology and Pathology of the Mind.* By HENRY MAUDSLEY, M.D. Lond. London : John Churchill and Sons, New Burlington Street, 1865, pp. 31.

In this ‘Introductory chapter’ Dr Maudsley thus asserts the foundation of Mental Science as the objective (inductive) method of investigation :—

"That the subjective method, the method of interrogating self-consciousness, is not adequate to the construction of a true mental science, has now seemingly been sufficiently established. This is not to say that it is worthless; for when not strained beyond its capabilities, its results may, in the hands of competent men, be very useful. D'Alembert compares Locke to Newton, and makes it a special praise to him that he was content to descend within, and after having contemplated himself for a long while, he presented in his 'Essay' the mirror in which he had seen himself; 'in a word, he reduced psychology to that which it should be, the experimental physics of the mind.' But it was not because of this method, but in spite of it, that Locke was greatly successful; it was because he possessed a powerful and well-balanced mind, the direct utterances of which he sincerely expressed, that the results which he obtained, in whatever nomenclature they may be clothed, are and ever will be valuable; they are the self-revelations of an excellently constituted and well-trained mind. The insufficiency of the method used is proved by the fact that others adopting it, but wanting his sound sense, directly contradicted him at the time, and do so still. Furthermore, Locke did not confine himself to the interrogation of his own consciousness; for he introduced the practice—for which Cousin was so angry with him—of referring to savages and children. And we may take leave to suggest that the most valuable part of Locke's psychology, that which has been an enduring addition to knowledge, really was the result of the employment of the inductive or rather objective method. Nay more: if any one will be at the pains to examine into the history of the development of psychology up to its present stage, he may be surprised to find how much the important acquisitions of new truth and the corrections of old errors have been due, not to the interrogation of self-consciousness, but to external observation, though it was not recognised as a systematic method. The past history of psychology—its instinctive progress, so to speak—no less than the consideration of its present state, proves the necessity of admitting the objective method.

"That which a just reflection incontestably teaches, the present state of physiology practically illustrates. Though very imperfect as a science, physiology is still sufficiently advanced to prove that no psychology can endure except it be based upon its investigations. Let it not, moreover, be forgotten, as it is so apt to be, that the divisions in our knowledge are artificial; that they should be accepted, and used rather, as Bacon says, 'for lines to mark or distinguish, than sections to divide and separate; in order that solution of continuity in sciences may always be avoided.' Not the smallest atom that floats in the sunbeam, nor the minutest molecule that vibrates within the microcosm of an organic cell, but is bound as a part of the mysterious whole in an inextricable harmony with the laws by which planets move in their appointed orbits, or the

laws which govern the marvellous creations of godlike genius. Above all things it is now necessary that the absolute and unholy barrier set up between psychical and physical nature be broken down, and that a just conception of mind be formed founded on a faithful recognition of all those phenomena of nature which lead by imperceptible gradations up to this its highest evolution. Happily the beneficial change is being gradually effected, and ignorant prejudice or offended self-love in vain opposes a progress in knowledge which reflects the course of progress in nature : the stars in their courses fight for such truth, and its angry adversary might as well hope to blow out with his pernicious breath the all inspiring light of the sun as to extinguish its ever waxing splendour.

"No one pretends that physiology can for many years to come furnish the complete data of a positive mental science ; all that it can at present do is to overthrow the data of a false psychology. It is easy, no doubt, for any one to point to the completeness of our ignorance, and to maintain that physiology never will securely fix the foundations of a mental science, just as it was easy to say, before the invention of the telescope, that the ways of the planets could never be traced and calculated. The confident dogmatist in this matter might well learn caution from the following example of the rash error of a greater man than himself : 'It is the absurdity of these opinions,' said Bacon, 'that has driven men to the diurnal motion of the earth ; *which, I am convinced, is most false.*' What should fairly and honestly be weighed is, that mind is the last, the highest, the consummate evolution of nature's development, and that, therefore, it must be the last, the most complex, and most difficult object of human study. There are really no grounds for expecting a positive science of mind at present ; for to its establishment the completion of the other sciences is necessary ; and, as is well known, it is only lately that the metaphysical spirit has been got rid of in astronomy, physics, and chemistry, and that these sciences, after more than two thousand years of idle and shifting fancies, have attained to certain principles. Still more recently has physiology emerged from the fog, and that for obvious reasons : in the first it is absolutely dependent upon the physical and chemical sciences, and must, therefore, wait for the progress of them ; and in the second place, its close relations to psychology have tended to keep it the victim of the metaphysical spirit." That, therefore, which should be in this matter is that which is ; and instead of being a cause of despair, is a ground of hope.

"But let it not be forgotten that the physiological method is only one (I) division of the objective method ; there are other divisions not less valuable :

"II. The study of the *plan of development* of mind, as exhibited in the animal, the barbarian, and the infant, furnishes results of the

greatest value, and is as essential to a true mental science as the study of its development confessedly is to a full knowledge of the bodily organism. By that means we get at the deep and true relations of phenomena, and are enabled to correct the erroneous inferences of a superficial observation ; by examination of the barbarian, for example, we eliminate the hypocrisy which is the result of the social condition, and which is apt to mislead us in the civilised individual.

" III. The study of the *degeneration* of mind, as exhibited in the different forms of idiocy and insanity, is indispensable, as it is invaluable. So we avail ourselves of the experiments provided by nature, and bring our generalisations to a most searching test. Hitherto the phenomena of insanity have been most grievously misinterpreted by the vulgar, because interpreted by the false conclusions of a subjective psychology. Had not the revelations of consciousness in dreams and in delirium been completely ignored by pretended empirical psychologists, truer generalisations must perforce ere this have been formed, and fewer irresponsible lunatics would have been executed as responsible criminals. Why those who put so much faith in the subjective method do reject such a large and important collection of instances as dreams and madmen furnish, they have never thought proper to explain.

" IV. The study of the progress or regress of the human mind, as exhibited in *history*, most difficult as the task is, cannot be neglected by one who wishes to be thoroughly equipped for the arduous work of constructing a positive mental science. The unhappy tendencies which lead to individual error and degeneration are those which on a national scale conduct peoples to destruction ; and the *nusus* of an epoch is summed up in the biography of its great man. Freed from the many disturbing conditions which interfere so much with his observation of the individual, the philosopher may perhaps in history discover the laws of human progress in their generality and simplicity, as Newton discovered in the motions of the heavenly bodies the law which he would in vain have looked for had he watched the fall of every apple in Europe.

" May we not then truly say that he only is the true psychologist who, occupied with the observation of the whole of human nature, avails himself not only of every means which science affords for the investigation of the bodily conditions which assuredly underlie every display of function, conscious or unconscious, but also of every help which is furnished by the mental manifestations of animal and of man, whether undeveloped, degenerate, or cultivated ? Here, as everywhere else in nature, man must deliberately apply himself to a close communion with the external, must intend his mind to the realities which surround him, and thus by patient internal adjustment to outward relations gradually evolve into conscious develop-

ment those inner truths which are the unavoidable expressions of the harmony between himself and nature. Of old it was the fashion to try to explain nature from a very incomplete knowledge of man ; but it is the certain tendency of advancing science to explain man on the basis of a perfecting knowledge of nature."

*The Legal Doctrine of Responsibility in relation to Insanity.* By  
S. W. NORTH, M.R.C.S.

A paper bearing the above title was read before the Annual Meeting of the National Association for the Promotion of Social Science held at York, September, 1864. Such an occasion presented an excellent opportunity for the introduction and discussion of this most important question. We are glad that a medical man availed himself of it, and are yet more so that this gentleman treated it both soundly and ably. The lawyers so generally have their own way on this subject in public, and are in a position to talk down the unfortunate psychologist in so overbearing (and for the time successful) a manner, that it is something for a doctor to be able to talk himself for half an hour without interruption, and force their unwilling ears to listen to a few truths alike of common sense and sound psychology. Mr. North laid down the only true test of legal responsibility with unmistakable clearness (that which we have so often insisted upon), namely, the *power* to act rightly, and not the knowledge of right and wrong. That this principle will one day be recognised, and the present monstrous *dictum* of the English law be buried in the tomb to which it has unrighteously consigned but too many victims, we have not the least doubt : but this triumph can only be brought about by the persistent efforts of our profession to educate lawyers and legislators in the facts of insanity and the principles of modern cerebral physiology. The intolerable assurance which could induce the Lord Chancellor to assert that it is not necessary "a man should have studied the subject of insanity in order to form a conclusion whether a man is or is not a lunatic," ought to arouse every alienist to maintain the dignity of his profession, and his primary right to form a judgment upon a subject to which he has devoted his life—no less a right than that which we willingly concede to the lawyer in purely legal questions.

Mr. North puts one aspect of the subject of his paper very forcibly when he says: "If the law recognises as a legitimate defence that an act in itself illegal was done under the coercion of others, it ought with equal justice not to overlook that coercion, which though arising *within the individual*, and therefore not so patent to our understanding as that from without, does nevertheless, according to the observation and experience of all who have had

opportunities of making themselves familiar with the phenomena of mental disease, frequently hurry its victim into the commission of every species of crime and depravity, with a power far more irresistible than anything which can spring from the influence of others." (p. 4.)

We had marked several other paragraphs for quotation, but our want of space obliges us to omit them.

The crying evil of the mode in which the evidence of medical experts is obtained under the present system is pointed out by Mr. North, and the true remedy insisted upon, viz., the entire independence of the medical witness of the prosecution on the defence, his report (which ought to be in writing) being addressed to the Court. Whether any good is to be gained by allowing cross-examination is an open question. If allowed it ought, we consider, to be restricted to the judge. When we compare the admirably written reports of the French experts with our own miserable *vivā voce* examinations in Courts of Justice, we are humiliated to see how much better they manage these things (as well as some others) in France.

In conclusion, we sincerely thank Mr. North for bringing forward this subject so strongly and lucidly on the occasion referred to, and trust that the influence of his remarks will be permanently felt in legal quarters. York has been prominent in the amelioration of the condition of the insane; it was fitting that, when the Social Science Association met within her walls, the true and only humane test of moral responsibility should be clearly preached, and a protest be entered against consigning the morally insane to the gallows.

D. H. T.

*On the Urine of the Insane: a Contribution to Urology.* By ADAM ADDISON, L.R.C.P. and S. Ed., Resident Medical Officer, Montrose Royal Lunatic Asylum.

(Reprinted from the 'British and Foreign Medico-Chirurgical Review' for April, 1865.

Mr. Addison's paper on 'The Urine of the Insane' is a most valuable contribution to the pathology of insanity, reflecting credit alike on his industry and research. Most of our knowledge of the chemistry of the urine in insanity, he reminds us, is derived from a paper on this subject published by Dr. Sutherland in the 'Medico-Chirurgical Transactions of 1855.' The conclusions arrived at by the author of that essay were the following:

1. A plus quantity of phosphates exist in the urine in the paroxysms of acute mania.
2. A minus quantity exists in the stage of exhaustion of mania,

in acute dementia, and in the third stage of general paralysis of the insane.

3. The plus and minus quantities of the phosphates in the urine correspond with the quantitative analysis of the brain and of the blood, for a plus quantity of phosphorus is found in the brain, and a slight excess of albumen in the blood of maniacal patients, and minus quantities of phosphorus and albumen are found in the brain of idiots, and a minus quantity of albumen in the blood of paralysis of the insane.

4. The plus quantity of phosphates in the urine of acute mania denotes the expenditure of nervous force, and is not a proof of the existence of acute inflammation in this disease.

Unfortunately, says Mr. Addison, the method of investigation adopted by Dr. Sutherland was not such as to give reliable results. It was the old and now obsolete one of determining only the percentage amounts of the urinary constituents without reference to the quantity of urine passed in a given time. No doubt it is true that, as Dr. Sutherland expresses it, there is a plus quantity of phosphates in one thousand grains of the urine of a maniacal patient as compared with the amount found in the same measure of urine passed in the normal state; but then the patient in acute mania may be voiding from ten to twenty ounces only in the twenty-four hours, whilst in health he excretes from fifty to eighty; consequently it may happen that, after recovery, with a greatly diminished percentage of phosphates, he actually excretes a larger quantity than during the maniacal paroxysm.

The mode adopted by Mr. Addison has been to collect the whole urine passed in twenty-four hours for three or more successive days, and to ascertain by analysis the absolute amounts of certain of its constituents excreted during that time. Dr. Sutherland refers to the impossibility of collecting all the urine during mania; but it is his experience that there are many cases where this can be done.

By careful attention on the part of the night attendant, and by placing a special nurse with the patient during day, he has perfectly succeeded in obtaining all that has been passed; and he confidently declares that the quantities he has given are correct. In acute cases which have recovered he has always compared the urine of the abnormal state with that of the normal, because the individual healthy standard must always be more correct than the average of a number of cases. In dementia and melancholia, where such a comparison has been impossible, he has adopted two methods. Firstly, he has compared the quantities voided under such conditions with those passed by healthy men and women, irrespective of age and weight; and, secondly, he has found the amounts excreted by 1 lb. avoirdupois of body weight in twenty-four hours, and contrasted them with the normal standard ascertained in the same way.

In order to facilitate this comparison, Mr. Addison gives, in the following table, made up from Dr. Parkes's book, 'On the Urine,' the amounts of those constituents which he has made the subject of examination; first, as they are excreted in health (age and weight indifferent); and, second, according to a definite weight of body:

| Constituent.         | MALES. |       |                                  |           | FEMALES. |       |       |                                  |
|----------------------|--------|-------|----------------------------------|-----------|----------|-------|-------|----------------------------------|
|                      | Minim. | Mean. | Maxi-                            | 1 lb. ex- | Minim.   | Mean. | Maxi- | 1 lb. ex-                        |
|                      |        |       | cretes in<br>24 hours<br>in grs. |           |          |       |       | cretes in<br>24 hours<br>in grs. |
| Chloride of sodium . | ..     | 177·0 | ..                               | ..        | ..       | 390·0 | ..    | ..                               |
| Urea .               | 286·1  | 512·4 | 688·4                            | 3·53      | ..       | 56·2  | ..    | 2·96                             |
| Phosphoric acid .    | 24·70  | 48·80 | 79·80                            | 0·336     | ..       | 30·2  | ..    | 0·464                            |
| Sulphuric acid .     | 17·34  | 31·11 | 41·14                            | 0·214     | ..       | ..    | ..    | 0·25                             |

After giving the detailed results of his analysis in sixteen cases of acute mania, he proceeds thus to summarise these results:—

The first fact observed on examining these tables is the remarkable diminution of the quantity of the urine which takes place during the course of a severe maniacal attack. This decrease appears to have an inverse relation to the rapidity of development and the intensity of the paroxysm, for in the milder cases it is not nearly so great. Nor is this wonderful when we consider how much of the watery elements of the blood must find an outlet through the skin as a consequence of the muscular exertions which accompany the restlessness, violence, and gesticulation of mania. The specific gravity of the urine in such attacks is also high; there is an excess of solids, and, on standing, a considerable quantity of sediment, especially of urates, is deposited. Owing to the want of a volumetric test for uric acid, I have been unable to subject this element to examination. The per-centages amounts of all the organic and inorganic constitutions are raised very far above the normal. In all my cases the urine was acid—very intensely so in the more severe forms—and in this my experience agrees with that of Sutherland.

Out of 16 cases the quantity of chloride of sodium was found less during mania than after convalescence in 14; nor is it inconsistent with dietetic and physiological principles that it should be so, for maniacal patients do not show much solicitude respecting condiments, whilst a considerable amount must find its way out of the body in other directions. The excretion of urea was diminished during the maniacal paroxysm in all the cases. The quantity of phosphoric acid excreted in states of mental excitement was less than after convalescence in all the cases except one, in which the analysis was made during a lucid interval and under unfavorable conditions. This, perhaps, is the most important fact elicited by the investigation, for a greater than the average excretion of the phosphates as come to be

regarded as a pathognomonic phenomenon of maniacal excitement. In two cases where I had an opportunity of examining the urine immediately after the appearance of maniacal symptoms, I found that the quantity of phosphoric acid excreted on the first day was larger than the average daily excretion after convalescence ; and from other observations I am disposed to believe that this often, though not always, occurs, for when the quantity of the urine is greatly diminished by a rapidly developed and severe mania, the amount of phosphoric acid is also lessened. I have known patients in whom there seemed to be a sort of suppression of urine, and from whom I could obtain no water for twenty-four or thirty-six hours. When it did appear, it was loaded with solids, but in quantity greatly below the normal. These facts would seem to suggest that the quantities of the urinary constituents excreted under such conditions are not to be regarded as anything like an absolute measure of tissue change ; that, in fact, large amounts may be retained in the blood from the want of water to dissolve and wash them out. This, however, is but a suggestion, and does not interfere with the actual excretion by the kidneys, which is the question at issue.

Again, though the amount of phosphoric acid excreted on the first day is higher than the normal daily average, the period of this increased excretion is so short, and, as I have said, so inconstant, and the fall in the quantity of the urine on the succeeding days so extreme, that it would be unphilosophical to regard it as an isolated fact. The better method, then, is to ascertain the absolute amount of phosphoric acid excreted during part of the course of a maniacal paroxysm greater than twenty-four hours, and to compare it with the quantity passed during an equal time after convalescence. This I have done, and the daily results I have given of the parts of a course of mania correspond exactly with the daily results of the whole course, as I have ascertained at different times ; consequently I consider it sufficiently proved that the quantity of phosphoric acid excreted during the course of a maniacal attack is less than that voided in an equal time after recovery. In 11 cases the amount of sulphuric acid excreted during convalescence was greater than during mania ; in 5 cases it was larger in the latter condition.

The following table shows the mean of the average daily quantities of the urine and its constituents excreted by all the cases during mania and convalescence.

|                     | During<br>mania. | During<br>convalescence. |
|---------------------|------------------|--------------------------|
| Quantity of urine . | 23·9 oz.         | 58·4 oz.                 |
| Specific gravity .  | 1025             | 1016                     |
| ClNa .              | 35·94 grs.       | 59·98 grs.               |
| Urea .              | 328·14           | 475·70                   |
| PO <sub>5</sub>     | 22·14            | 30·54                    |
| SO <sub>3</sub>     | 21·42            | 23·07                    |

Mr. Addison next records the results of his analysis in eleven cases of melancholia. All these cases of chronic melancholia and monomania of fear (he says) give results very far below the mean in healthy men and women. In two cases, the amount of urea is about normal. The following table gives the mean of the daily average excretion in nine cases. I have included the male and female cases in the same group, but the amounts do not differ so much as to affect the result :

|                 |   |   |   |   |   |   |            |
|-----------------|---|---|---|---|---|---|------------|
| ClNa            | . | . | . | . | . | . | 36·67 grs. |
| Urea            | . | . | . | . | . | . | 270·44     |
| PO <sub>5</sub> | . | . | . | . | . | . | 20·04      |
| SO <sub>3</sub> | . | . | . | . | . | . | 13·08      |

Mean excretion according to weight, in eight cases :

|                                     |       |
|-------------------------------------|-------|
| 1 lb. excretes in grs. in 24 hours. |       |
| ClNa                                | .     |
| Urea                                | .     |
| PO <sub>5</sub>                     | .     |
| SO <sub>3</sub>                     | .     |
|                                     | 0·267 |
|                                     | 1·961 |
|                                     | 0·139 |
|                                     | 0·090 |

A reference to the table made from Dr. Parkes' book will show that the results as to weight are remarkably below the mean in health.

The small amounts of urinary constituents excreted by melancholics may be accounted for from their indifference to their food, their apathy, bodily torpor, languor, and inactivity. According to the prevalent theory, one would have expected a large excretion of phosphoric acid as the consequence of mental anxiety, but such does not appear to be the case.

The analysis in eight cases of general paralysis then follows. These show, writes Mr. Addison, that in states of excitement the quantities of chloride of sodium, urea, phosphoric and sulphuric acids are less than in the quiescent state. In the demented cases quantities are about normal—some slightly above, and some below, the mean. In two cases, the excretion, according to weight, was also very near the mean healthy standard, and in one, the phosphoric acid was above it when compared without reference to weight. In the last stage of general paralysis it is impossible to obtain the twenty-four hours' urine, but I have no reason to suppose that the result would differ much.

Lastly, the analysis in 14 cases of dementia and idiocy are given. The amount of phosphoric acid was less than the mean in all cases, but in none was it below the minimum; and in four cases the excretion by one pound of body weight was greater than the healthy mean. Two, who passed a larger than average quantity of phos-

phoric acid according to weight, were congenital idiots who could not speak, another, a case of so-called acute dementia, and the fourth had been two years demented. With such facts as these in view, and considering that in none of the twelve cases was the average daily excretion of phosphoric acid below what has been found by several observers in healthy adult men, Mr. Addison cannot altogether endorse Dr. Sutherland's statement that there is a minus quantity of phosphates in the urine of dementia. *Indeed, he believes that the excretion of phosphoric acid is regulated more by the condition and weight of the body than by the action of the brain.* No doubt, in an ill-conditioned dement, who does not take his full quantity of food, the absolute amount of phosphoric acid excreted will be small compared with the healthy mean, but less so when contrasted with the mean healthy excretion by 1 lb. of body weight.

The following table gives a comparison of the mean daily excretion of 12 cases, with the mean amounts in health:—

| Constituents.         | In dementia.   | In health.  |
|-----------------------|----------------|-------------|
| ClNa . . .            | 64·92 grs. . . | 177·00 grs. |
| Urea . . .            | 517·24 . . .   | 512·40      |
| PO <sub>5</sub> . . . | 35·20 . . .    | 48·80       |
| SO <sub>3</sub> . . . | 27·03 . . .    | 31·11       |

The next shows the mean excretion in 11 cases by 1 lb. of body weight in twenty-four hours, compared with the normal mean found in the same way:—

| In dementia 1 lb. excretes in grs. in 24 hrs. | In health 1 lb. excretes in 24 hours. |
|---|---------------------------------------|
| ClNa . . . . 0·557                            | Urea . . . . 3·53                     |
| Urea . . . . 4·311                            | PO <sub>5</sub> . . . . 0·336         |
| PO <sub>5</sub> . . . . 0·291                 | SO <sub>3</sub> . . . . 0·214         |
| SO <sub>3</sub> . . . . 0·216                 |                                       |

It will be seen from these tables that the differences between the quantities in dementia and in health are no greater than occur in individual healthy cases.

The conclusions which Mr. Addison deduces from the whole foregoing observations are:—

1. *That the quantities of the urine, of the chloride of sodium, urea, phosphoric and sulphuric acids, excreted during the course of a maniacal paroxysm, occurring in acute mania, epilepsy, general paralysis, melancholia, or dementia, are less than the amounts excreted in an equal time during health.*

2. *That in chronic melancholia the quantities of the chloride of sodium, urea, phosphoric and sulphuric acids are reduced below the mean, and sometimes the minimum, of health.*

3. That in idiocy, dementia (paralytic and common), the urea, chloride of sodium, and sulphuric acid range above and below the normal mean of health; that in some cases the amount of phosphoric acid is greater than the mean according to weight, but in the majority of cases it ranges between the minimum and mean found in healthy adult men.

I shall be satisfied if these observations serve no other purpose than to point out the foundation upon which an exact pathology of the urine of the insane must be built. My thanks are due to my chief, Dr. Howden, for facilities given to make this inquiry.

*On a Simple Method of Treating Certain Kinds of Epilepsy, Dementia, and other Chronic Head Affections.* By THOMAS LAYCOCK, M.D., &c., Professor of the Practice of Medicine and of Clinical Medicine, and Lecturer on Medical Psychology and Mental Diseases in the University of Edinburgh.

(*Med. Times and Gazette*, May 6th and May 13th, 1865.)

THIS "simple method" of Professor Laycock for the treatment of epilepsy, headache, and delirium, and chronic mental defects, consists in the application of irritants to the nostrils. Dr. Laycock made his first experiments with strong liquor ammoniæ and snuff, but subsequently he had recourse to medical compounds. "After various trials," he says, "I have found the following a safe formula for a sternutatory:—R Pulveris cinchonæ, gr. ix. Pulveris hellebori albi, gr. x, misce intimè. Sigma. 'The sneezing powder.—A very small pinch to be placed just within the nostrils three times a-day, so as to excite frequent sneezing for ten minutes. To check the sneezing, if necessary, wash out the nostrils with cold water snuffed up.' I have seen dangerous sneezing excited by the powdered hellebore. It would be easy to devise other formulæ. The Greek physicians prescribed pepper, euphorbium, soapwort, gith (or *nigella sativa*), elaterium, and castor in powder. They also injected the nostrils with the juices of pimpernel, leeks, and other plants, and mixed the juice of elaterium with milk for an injection. Aretæus mentions in his chapter on the treatment of cephalæa a syringe with two delivery pipes, made expressly for the nostrils. He also blew powders up the nostrils through a reed or quill, and applied ointments and liniments within the nostrils by means of a feather. Any irritant thing easily removed and manageable as to its effects on the mucous membrane would, doubtless, serve the purpose. Aretæus ascribes, however, valuable uses to powdered castor beyond its mere effects as an errhine or sternutatory. In so far," he continues, "as

the irritation of the nostrils by irritant drugs is curative, we can substitute mechanical irritation for them. The act of sneezing requires a co-ordination and harmonising of numerous groups of muscles, and probably the change in the nerve-centres that induces this arrests also the defect in the regulating centres, which I have shown to be the chief element in the production of epilepsy. I have accordingly tried irritation of the nostrils with a feather or a quill. A young lady had an attack of the *petite mal* while seated at table. I instantly irritated the nostrils mechanically by scratching them, and in a few seconds she was restored, but without the slightest knowledge of what had happened. On a previous occasion a like attack had passed into convulsions. A young gentleman had a very similar attack in my presence, but with slight facial convulsions, and the fit was ended in a few seconds by the same means. That the irritation is the effective element in the treatment, is further shown by the fact that the *throat* may be irritated with advantage in other paroxysmal affections. There is a kind of hysterical fit in which the patient seems to be strangling, for she "fights" with her hands about the wind-pipe, and also appears to be partly unconscious. In these cases I have found it successful treatment to irritate the throat with a feather, so as to excite retching. So soon as this happens, the patient heaves a deep sigh, and is at once relieved from the fit, much to her apparent surprise. I have tried this plan for many years, and I conclude from certain statements made by Aretæus and Paul of Egina that a like procedure was anciently found of use in certain head affections—viz., epilepsy, tetanus, and vertigo. The burnt feathers and the fetid things used from time immemorial may have a double effect. They may excite the same nausea and retching which tickling the throat excites, and thus harmonise the disordered nerve-centres into a physiological act. And they may also act as irritants on the pulmonary membrane, for I have reason to think that bronchial irritants may be beneficially used in these cases. It is necessary to remember, in treating epilepsy by nasal irritants, that the nostrils have often such a dull sensibility that sneezing cannot be excited, and that this state is worse just before, or on the accession of, the fit. The inhalation of the vapour of ammonia is a wholly different thing, and has probably a different mode of action on the medulla oblongata, since the vapour must, in part at least, reach the laryngeal or bronchial mucous membrane, and act through that on the medulla oblongata."

**2. Headaches and Delirium.**—Hemicrania may also be relieved by these means. This kind of headache, known as sick headache, *migraine*, the *megrims*, seems to be rather a neuralgia of the cranium, or dura mater, or the scalp than of the encephalon, when it occurs in its simple paroxysmal form unassociated with any structural disease of those parts. Some difference of opinion is expressed as

to its nature, but there seems little doubt that it is of vascular origin, for the chief characteristic is the intensely painful throbings of the temporal and other arteries, aggravated by any movement. That it is also centric seems probable from the symmetrical distribution of the pain and from the concurrent affection of the stomach, in which there is often the production of an intensely acid fluid as well as nausea and vomiting. Dr. Brown-Séquard thinks the symptoms affecting the face, ear, and eye indicate a palsy and not an irritation of the sympathetic or vaso-motor nerves. Prof. Du Bois-Reymond (who has published his own case) is of opinion, on the contrary, that there is a sort of tetanic contraction of the blood-vessels from irritation of the sympathetic system. But neither palsy nor contraction explains the distressing *pain*, for both conditions of the vessels notoriously occur without any pain whatever. It is, therefore, a sensory and not a purely motor affection of the nervous system. Now, I have found, says Professor Laycock, that the smelling of strong smelling salts or liquor of ammonia far more certainly alleviates, and even cures, than ammonia and other stimulants taken internally. Some of these, indeed, make matters worse by exciting vomiting when the head feels to split at every strain on the stomach. I therefore think the action of the irritant is directly on the medulla oblongata.

In hallucinations and delirium the mental disorder seems to be proximately due to a loss of that co-ordination of the various encephalic centres engaged in perception and thought upon which the unity of consciousness depends. It therefore seemed to me to be *a priori* probable that the same class of means which co-ordinate motor centres when disordered would restore the balance of the sensorial centres. I have long demonstrated this to my clinical class as to delirium when opportunity served. It not unfrequently happens that a delirious patient cannot be got to take his medicine or attend rationally to things necessary for his benefit. Now, irritating the nostrils will often serve to recal the patient, temporarily at least, to reason, so that time is given for the administration of the dose or for other matters. In like manner, when a patient awakes out of sleep in a state half way between delirium and hallucination, this very simple means will be found more available than shouting to him, shaking him, or the like.

3. *Chronic Mental Defects and Dementia.*—The results of nasal irritation in relieving the hebitude of the epileptic, observes Dr. Laycock, suggests its application to states of mental apathy and torpor in which it is reasonable to conclude that there is defective nutrition and circulation of the encephalon, whether with or without defective co-ordination. There are various forms of insanity and dementia which a permanent excitation or modification of the cerebral circulation and nutrition artificially induced by this kind of treat-

ment would cure or relieve, seems fairly deducible from various cases in which improvement has originated spontaneously. Dr. Skae mentions instructive examples in his report of the Royal Edinburgh Asylum for 1859. A patient who had been ten years in the institution, and in a very imbecile state, appeared to be remarkably sensible for two days before his death. In two cases of chronic mania there was also a remarkable interval of sanity extending to several hours, which occurred immediately before a fatal apoplectic seizure. This illustrates the nature of the cerebral change to which the change in the mental state is due. In persons predisposed to apoplexy an analogous condition is sometimes seen. After suffering from various head symptoms they go to bed, feeling better than they have felt for a long time, and during the night have a fit. Perhaps the most striking example of this kind of change in dementia is recorded by Dr. Skae:—"A lady, whose resistance extends to forty-six years, was lately seized with an illness which threatens to be her last. She has not been known, in the memory of the oldest officer or servant, to answer a question or to speak at all, except to swear or talk to herself incoherently while being undressed. On recovering from the immediate effects of the invasion of this illness, she conversed very coherently, asked a portion of the Bible to be read to her, and mentioned the chapter she preferred. She named parties connected with the asylum twenty years ago, and spoke intelligently of events previous to that period, but seemed quite ignorant of any of the present officers." (Report, 1859, p. 29.) The therapeutic problem for solution is—how to induce artificially that change in the encephalon which in these cases follows upon disease? I think excitation of the cerebellum and medulla oblongata is the chief point to be aimed at, so as to induce at once both a better co-ordination of the encephalic centres and an increased activity of circulation and nutrition. In cases of so-called hysterical palsy the effect of emotional changes in this way is often very striking; and even in other cases of a more organic kind they are powerfully curative. I knew a gentleman suffering from hopeless paraplegia, believed to be dependent on cerebellar disease, who rose from his chair and walked freely under the influence of a painful hallucination. Febrile diseases, such as scarlatina or measles, occurring to the insane sometimes restore them to sanity, during at least the course of the fever. My friend, Dr. Rorie, of the Dundee Asylum, mentions the case of an aged female, the subject of recurrent mania, who was restored to reason in proportion as a disease of the liver advanced, and which finally caused death. The restoration of reason in acute head-affections for a few hours before death is not at all uncommon, and is, indeed, prognostic of a fatal issue. How, then, can we induce similar changes therapeutically, so as to secure their permanent curative effect? In all these instances there is

probably at first an increased activity of the encephalic circulation, due to that kind of change in the vessels which follows upon lesion of the cervical sympathetic, together with an evolution of heat. It would be hardly possible to act upon that system directly, but perhaps drugs may be discovered which have indirectly this effect. At present we are too much in the dark as to the action of opium, strychnine, and the like, on the cerebral circulation to use them rationally. Excitation of the nerve-centres directly may be, however, available, and the means thereto are very various. Thus I have found that the stimulus of a cold douche to the face has instantly removed defective co-ordination in melancholia, and relieved a patient from depressing delusions; and nothing in these cases is so exhilarating as breathing cold air. Some curious illustrations of the tonic effects of cold on the nervous system have been lately published by my friend, Mr. Roberton, of Manchester, in the form of cases of child-crowing in infants cured by exposure of them to a cold dry wind. So important is this remedy in certain forms of melancholia and dementia, that I believe the cure of such cases is hopeless in the crowded dormitories and wards of asylums. Local excitation through the skin, nostrils, and lungs, of the encephalic centres, conjoined with a rational treatment in other respects, may do much; and perhaps we may yet discover drugs or other means by which we can excite artificially that encephalic condition which is sometimes so curative in apparently the most hopeless cases as to the merely mental states.

*On a new Remedial Agent in the Treatment of Insanity and other Diseases.* By S. NEWINGTON, B.A. Oxon., M.R.C.P. Lond.

(The 'Lancet,' June 10th, 1865.)

DR. NEWINGTON relates in the 'Lancet' the successful employment by him at Ticehurst of baths and packing in the wet sheet medicated with mustard. It is a remedy (he writes) which appears to afford us a powerful and valuable means of withdrawing the blood from any diseased organ to which there is an abnormal determination; and, at any rate, it is often most efficient in subduing the excitement of mania and in inducing sleep.

It is now known that during sleep the quantity of blood in the brain is less than during wakefulness, and that the active circulation of much blood through the brain is incompatible with healthy sleep. When the cerebral functions are disordered from excess of activity, mental anxiety, or other cause, there is a determination of blood to the brain, sleeplessness ensues, and the effect in its turn becomes the

cause of further mischief. Maniacal patients have been frequently brought to me who have been for six or seven days without sleep, and when repeated doses of morphia and antimony have proved worse than useless. Indeed, the frequent disappointments from the administration of narcotic drugs during an experience of twenty-two years in the treatment of insanity have led me to try various experiments for the purpose of obtaining some simpler and more certain method of calming excitement and producing sleep.

While staying at Matlock Bath (continues Dr. Newington), I was induced to try the effects of being wrapped up in clothes steeped in mustard-and-water, and applied to the whole legs and to the lower part of the abdomen. After the removal of a wet towel which had been applied round the head and was very uncomfortable, I began to experience the most soothing effects, and gradually passed into a dreamy semi-conscious state, which lasted during the half-hour I was under treatment. On getting up, I felt very lively and joyous, the liveliness lasting the whole day; and for nearly twenty-four hours there remained a pleasant tingling sensation in the legs, which were affected in no other way than by redness. It occurred to me at once that this kind of application might be very serviceable in certain cases of insanity, and immediately on my return home I set about making experiments for the purpose of testing its value.

On retiring to rest I ordered a large basin of linseed-meal and mustard (ten parts of the former to one of the latter) to be made into a paste, and spread upon a sheet of brown paper sufficiently large to cover the whole abdomen, a piece of muslin being interposed to keep the skin clean. In a short time I fell asleep, and was conscious of nothing till eight in the morning, when I was partially roused by persons about me; but I was unable to speak or move. One of my medical assistants was thereupon sent for, and he pronounced me in a state of stupor from some narcotic. Though I was unable to speak, I heard the whole of the conversation, and was in a dreamy semi-conscious state. On the administration of some stimulant I presently recovered.

Another form in which I use the mustard is this:—Two handfuls of crude mustard are tied in a cloth and placed in hot water, then squeezed in the hand until the strength of the mustard has been extracted. A thick towel, long enough to reach round the loins, is then wrung out of this infusion, wrapped round the body, and covered with a large piece of macintosh. In one case a patient suffering from acute mania, who was restless, sleepless, and refused food, was thus treated with the greatest benefit. Before the application the pulse was 108, but after two hours of this treatment it had fallen to 60 in the minute, and the patient was in a quiet semi-conscious state. Afterwards he took his food regularly, and in a short time left perfectly recovered.

A third form in which this derivative treatment may be applied is as a mustard bath: in other words, an ordinary warm bath into which have been thrown five or six handfuls of crude mustard. In some cases the deep hip-bath only may be used; but in severe cases of mania the whole body of the patient, with the exception of the head, should be placed in the bath. A lady so treated, who had during the last year had four attacks of violent mania, each lasting for five or six weeks, has now for twenty-two weeks had no further attack, although the symptoms usually forerunning the seizure have on several occasions occurred: the mustard bath appears to have warded off the recurrence of the excitement. In this case the bath was used once every twelve hours, for half an hour at a time, during a period of ten weeks; so that the skin was kept in a constant state of redness. It may be hoped that the habit of diseased action has now been broken, and that this patient, after due probation, may be discharged as recovered.

Dr. Newington relates the following cases in illustration of the success attending this method of treatment:

Mr. W— was brought to me in a strait-waistcoat, and as many as six people had been, it was said, necessary to control him before his arrival at Ticehurst. Notwithstanding repeated doses of opium, he had not slept for six days and nights; and through the night after his admission he was excited, restless, and talkative. On the following night he was placed in a mustard bath for half an hour, so that he was perfectly red on being taken out. During the next eight days he had six of these baths, and at the end of a fortnight after admission returned home on trial.

A lady who, notwithstanding repeated doses of morphia, had not slept for seven days and nights, was admitted in a state of mania, extremely incoherent and excited. After being in a mustard bath for half an hour she became calm and comparatively rational, and expressed herself as feeling much more comfortable. She was then wrapped up in a blanket and put to bed, where she soon fell into a sleep that lasted for seven hours; and in the morning she awoke free from excitement. The treatment was continued for six nights, and no further excitement occurred, although, as she had been insane for two years, her mind remained unsound.

These instances, says Dr. Newington, in concluding this interesting communication, with others that I might quote, suffice to prove that in the proper use of these derivative measures we have a valuable remedial agency in the treatment of insanity. As nature, aiming to restore the nervous element of the brain wasted by the day's labour, diminishes the activity of the circulation through it, and allows the process of repair to go quietly on, so we, imitating nature, strive in this treatment of insanity to withdraw the excess of blood from the disordered brain, and thus to favour the restoration of the natural equilibrium and the return of healthy function. And as when a morbid action continues for some time a *habit* of it is apt to be formed, and the habit to become a "second nature," so, on the other hand, whenever the morbid activity is interrupted, the tendency

to revert to its sound type, which exists in all organic elements, fails not to assert itself, and, if sufficient time be allowed, to restore the normal function. We perceive, then, how exceedingly important it is to produce natural sleep in the earlier stages of insanity. In using the mustard bath, it is necessary to protect the privates with a folded dry towel; and it is of course desirable to have the bath placed near the bed, so that the patient may pass directly from it into his bed. If a little constraint is required on the first occasion of its use, it will rarely be found necessary on any subsequent occasion.

*Climacteric Insanity in Women.* By FRANCIS SKAE, M.D., Assistant Medical Officer of the Borough Asylum, Birmingham.

(‘Edinburgh Medical Journal,’ February, 1865.)

INSANITY occurring in women at the climacteric period, connected with and dependent upon the physiological changes then taking place, has been noticed by most writers on female diseases as one of the gravest and most important of the morbid conditions which are incident to that time of life. Various psychological authors, says Dr. Francis Skae, as Esquirol, Conolly, Sir H. Halford, Laycock, and others, have also observed the frequency of insanity in woman at that period, and have referred to the “change of life” as the exciting cause of a large proportion of those cases of insanity which are met with between forty and fifty years of age.

Dr. F. Skae divides his remarks on climacteric insanity in women, based on an analysis of 200 cases recorded in the books of the Morningside Asylum, under the four heads of, I. Age. II. Symptoms. III. Results. IV. Treatment.

I. *Age.*—Most writers are agreed in stating that the grand climacteric of female life takes place between forty and fifty years of age. They also admit that there are many exceptions to this; that menstruation not unfrequently ceases before forty; and again, that the function may continue unimpaired up to fifty-five or fifty-six years of age.

Dr. F. Skae found that the largest number of cases occurred between forty-four and fifty-one years of age.

II. *Symptoms.*—Insanity, writes Dr. F. Skae, occurring at the climacteric period generally manifests itself at first in the form of depression of spirits, sleeplessness, restlessness, and inattention to ordinary domestic affairs, followed by fear of undefined evil, with suspicion of the patient’s most intimate friends and relations. From this the patients gradually pass into a state of profound melancholia, accompanied by various delusions, such as, that they have committed the unpardonable sin; that they are doomed to eternal punishment; that evil spirits constantly surround and haunt them; that their food

can no longer nourish them ; that they are unworthy to live any longer : they constantly express themselves as weary of life, and this, together with the conviction of their own unworthiness and wretchedness, leads to the development of one of the most dangerous, and at the same time one of the most prevalent of the symptoms of climacteric insanity, namely, suicidal tendency. In a great number of cases paroxysms of excitement alternate with the deep depression and gloomy despondency which are the general characteristics of this form of insanity. In several cases hallucinations of the senses occur, and in a few delusions of an exalted character also exist. Many are dangerous to others during the transient paroxysms of excitement, or in consequence of hallucinations of the senses ; but distinct homicidal impulse is rarely developed. The bodily condition is commonly weak, although Dr. Tilt and others describe an aggravated form of hysteria, amounting to insanity, as occurring at this period of life in connection with a plethoric habit of body, and as dependent on an overplus of blood in the system. All those cases of insanity at the critical period which have come under my own observation, as well as those with whose history I have made myself acquainted, presented a marked asthenic type of disease ; the patients were for the most part anaemic and emaciated. Apart from the delusion that their food could not nourish them, there was loss of appetite, frequently amounting to nausea at the appearance of food. The bowels were almost invariably constipated, the tongue dark and furred, the pulse thin and easily compressible, the countenance pale, bloodless, and haggard. With regard to the condition of the catamenia, the records of the asylum were not such as to afford any information which could be thrown into a tabulated form. It appears, however, that, in the great majority of cases, the catamenia were extremely irregular at the time the insanity supervened, while in others the insanity developed itself a short time (two or three months) after their total cessation.

I may here remark (he adds) of the symptoms, that although they are met with individually in other forms of insanity, their existence as a group is so peculiar and characteristic of the insanity I am here describing, that any one accustomed to observe them could, I think, almost with certainty pronounce any case to be one of climacteric mania, from the symptoms alone, irrespective of a knowledge of the patient's age and history.

*III. Results.—*They were in Dr. F. Skae's 200 cases as follows :

- 104 recovered.
- 44 became demented.
- 24 removed improved.
- 22 died.
- 3 removed unimproved.
- 3 convalescent.

From this it is seen that the recoveries took place in the ratio of 52 per cent.; or 55 per cent., if we include the three convalescent cases. This, Dr. F. Skae remarks, is higher than the per-cent-age of recoveries from melancholia in general, which is stated to be only 27 per cent. by Haslam, although Dr. Tuke found it as high as 54·88 at the Retreat.

Of the 200 cases 22 died in the asylum during the period of eighteen years, over which this investigation extends, thus giving a mortality of 1·22 per annum, or ·61 per cent. per annum. This rate of mortality, says Dr. F. Skae, is so very low as to demon-strate that, apart from suieidal tendency, organic disease, or other morbid complications, this form of insanity has but little tendency to a fatal termination.

III. *Treatment.*—Dr. F. Skae places great reliance on the use of opium in the treatment of climacteric insanity.

Narcotics, he says, form one of the most efficient means of alleviating and curing this form of insanity. It is somewhat difficult to lay down general rules for their administration. In some cases they obviously aggravate the restlessness and excitement, in others they act apparently like a perfect charm in procuring sleep and allay-ing nervous irritation and despondency without interfering with the general health. The cases most suitable for this method of treat-ment appear to me to be those chiefly which are characterised by a general feebleness of the circulation, and a well-marked anaemic state of the system. In some such cases I have seen large doses, such as two drachms of the solution of the muriate of morphia, given nightly for a lengthened period, attended with the most beneficial effects, and without any disturbance of the general health. The exhibition of such powerful doses must always be continued under the strict supervision of the medical attendant, and they must be carefully diminished and gradually withdrawn by him before the patient is left to her own control. In many cases where morphia seemed to disagree with the patient, other narcotics were used with advantage, such, for example, as the tincture of hyoscyamus and tincture of cannabis indica. These medicines require to be used in larger doses than in ordinary practice to produce the desired results, but the requisite dose can only be arrived at by a gradual increase from the ordinary medicinal dose up to that by means of which the desired object of natural repose is attained.

The conclusions to be drawn from Dr. F. Skae's study of this disease are :

1st. That the symptoms of insanity occurring at the climacteric period in women are so uniform, characteristic, and peculiar as to render it easily recognisable, and entitle it to be referred to a distinct natural group or family, which may be distinguished as climacteric mania or insanity.

2nd. That this is one of the most curable forms of insanity accompanied by melancholia.

3rd. That the duration of the insanity in curable cases rarely exceeds from three to six months.

4th. That this form of insanity, apart from suicide and organic disease, rarely tends to a fatal termination.

5th. That the most important indications of treatment are, the early removal from associations and friends; careful watching; nutritious diet; and the judicious administration of narcotics.

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#### PART IV.—NOTES AND NEWS.

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##### *Gheel in the North.*

(*From a Correspondent.*)

"It is not surprising that among a population debased by misery, the feelings of humanity should frequently be blunted, and that parents should seek to profit by the misfortunes of their children." "The habitual presence of an insane person is apt to induce the disease in others, especially where there happens to be a hereditary tendency. The comfort of the household is destroyed, habits of regularity and industry are broken through, and not unfrequently the constant sight of the sufferer engenders a feeling of despair and induces a habitual resort to intoxicating liquors." "It must, however, be borne in mind, that the comforts of the people vary very much in different districts and hence the miserable condition of the insane poor in the northern and north-western counties cannot be received as equal evidence of neglect, as in the midland and southern counties and in our large towns."—*Reports, General Board of Commissioners in Lunacy for Scotland.*

UNLESS an Alienist be utterly Gheel-struck, he must needs concur in the well-considered and wise views of the vast majority of the members of the Medico-Psychological Society of Paris, expressed during a discussion at the fortnightly meetings throughout the past winter, upon the management of the Insane. The comprehensiveness, the sound philosophy, the philanthropy, and experience displayed in these deliberations constitute an era in the history of Psychology, and place our fellow-labourers in France in a most prominent and enviable position in what may be called the science of moral economy.

The subject under investigation, the real question at issue in this tournament, was the comparative merits of asylums and private dwellings in the disposal or management of the insane; although a vast number

of collateral and subsidiary ramifications were obtruded, or arose naturally, as elements or adjuvants in the controversy. The Farm, the Cottage, the Colonial Asylum; the percentage of the insane that can be employed; the value of their labour; the mental and moral influence exercised, where there is no pecuniary or other profit, even where there is loss involved in the experiment,—had their respective advocates or opponents. It would be presumptuous rigidly to classify the supporters of the various opinions advanced; but while it is painfully obvious that the most extreme, and extravagant, and revolutionary views found champions; that while Brunet denounces asylums, Mundy extols Gheel, and Auzouy derides, and, we think, calumniates home treatment; it is consolatory that a very large number, and these the most distinguished and practical physicians, including Falret, Foville, Girard de Cailleux, Billod, Parchappe, have propounded discriminating, and moderate, and conservative doctrines, which appear to be founded upon a fair judgment of the characteristics and working of the antagonistic systems proposed. It is, however, worthy of profound consideration, that a large number of those who seek to introduce such a change as would reduce asylums to mere hospitals for the treatment of acute, or lock-ups for the safe custody of violent and dangerous cases, and would convert every village or homestead into a Gheel, are, though able and benevolent theorists, either nonprofessional, as Duval, Mundy; or though professional as Bulkens, Parigot, &c., are utterly ignorant of asylum life. They have never lived in close contact with the insane; and, if familiar with cottage scenes, such as are pictured in Burn's "Cottar's Saturday Night," or with the charitable missions of such idiots as "Betty Foy's Boy," cannot pretend, and do not, we conceive, pretend to know anything of the inner and habitual life of the insane, nor of the forbearance, the outpourings of kindness, and attention, and adroitness, if not the delicacy, required and positively exercised towards them by their guardians, even in the worst asylums. These writers are amiable amateurs, sanguine optimists, who, strong in a non-medical theory as to mental disease, and electing a few glimpses of the superficial and favorable relations between the insane and sane, conceive that, given a tolerably clean and comfortable house, swept and garnished, though it may be by the spirits of gain and greed, and an honest or enterprising clodhopper; a chronic lunatic is, under such circumstances and governance, safe, well treated; or, as well cared-for, and with as good chances of amelioration and happiness as if he were in an asylum surrounded by every scientific contrivance and source of health, and under the constant supervision, and, in one or more senses, under the care and treatment of an educated and experienced physician. But to turn from such unweaning and illusory confidence, with as great doubt as from the equally deceptive and sceptical convictions of

M. Auzouy, who, in order to illustrate the "patronage familial" cites the cases of an excitable deaf mute, who, transferred from acting as swineherd in an asylum to his own commune, became erratic, vagabond, and nearly perished from hunger; and of a melancholic who, on liberation, under excitement attempted incendiarism, murder, &c.;—and let us consider a fair formulisation and epitomisation of the opinions of the French, and, we believe, of English practical psychologists upon this subject.

1. The annexation of farms to asylums is the best means of ameliorating the lot of robust and inoffensive lunatics, as it provides for a considerable proportion of patients that comparative freedom and mode of life and occupation most in keeping with their previous social condition. Such agricultural colonies, or offshoots, far from creating a new system in opposition to the established practice of existing asylums, form a legitimate development and complement of what has long been in operation. They constitute the organization of labour in the interest alike of the patient and the hospital; they recognise the necessity for preserving for labour the rank and characteristic of a hygienic remedy, while imparting to it a lucrative direction.

2. The improvised erection of villages similar to that of Gheel cannot, under existing circumstances, be accomplished. But even admitting that, therapeutically, such an arrangement may offer advantages for certain classes of cases, which are neither curable nor dangerous; it is very doubtful whether such a plan would be more economical than the cloistered or farm asylum, especially seeing that the cost of the former might, without detriment, be greatly diminished; and provided the productiveness of succursal farms be not exaggerated. This ingredient should, if possible, be eliminated from such an inquiry. As physicians we are called upon to heal and not to economise; our concern should be confined to the medical and moral aspect of each case, to the best and readiest means of cure; or, should the eradication of the disease be impracticable, to that amelioration which secures the greatest amount of happiness and comfort compatible with such an affliction; and which prevents that degeneration which is inevitable under neglect, low diet, and depressing circumstances. To allow the expense of the course to be pursued to enter into, or to sway, our mode of treatment, is to chaffer with the most sacred interests of our profession and of humanity; and to save money at the risk of sacrificing reason and of adding suffering to incurability. It is to prescribe Salicine, which is less efficacious, in place of Quinine, which is less expensive.

3. The placing of tranquil lunatics with peasants, or attendants, or nurses in the vicinity of an asylum, may be advantageous for certain patients; but the proportion of those who could benefit by such an arrangement must always be limited by the small number

of families, at a convenient distance, who could be confided in so far as to be constituted the guardians of the insane.

4. There is, and will always be, a certain number of lunatics who may be left, and who have actually been left, under the charge of their friends, supported by public funds, but upon conditions that they shall be frequently and regularly seen by medical officers, who shall satisfy themselves that their patients are properly cared for; that their malady does not assume an aggravated or dangerous form, and who shall employ whatever curative or palliative means may be admissible. The proportion of patients who may be intrusted to this domestic management ought not to exceed a sixth of those placed in asylums.

That many lunatics, in many if not in all countries, will never be subjected to treatment at all, and will remain in private dwellings, is a point that has long ago been settled by the influence of the best, as well as by the basest, motives of which the heart is susceptible, and will certainly not be unsettled by medical or popular views as to centralisation or colonisation, nor perhaps by any general considerations. Affection, a mistaken sense of duty, will detain in the bosom of a family many who should have been sent to an asylum; and selfishness and sordidness will send away many who might have lived and died under the shelter and sunshine of domestic care. The numbers of this class will be in proportion to the population and to the characteristics of their dwellings; and will, necessarily, vary according to the social habits—the degree of civilisation in particular countries; but there are perhaps few countries in which they are more numerous, or in which their actual condition has been more thoroughly ascertained and laid open to the public view than in Scotland. In England 18, in Scotland 31·7, and in France 50 per cent. of lunatics, live with their relatives, or with those who act in that capacity. The inspection and published reports of the officers of the Board of Lunacy have brought about this publicity and presented much, perhaps all, that is objectionable and all that is attractive in the arrangement. It may be a profitable inquiry, while so many alienists are engaged in determining the cases, or the class of cases, which may safely and beneficially be withdrawn from treatment, or where direct treatment is inadmissible or useless, from the comforts and protection of an asylum, to take advantage of information derived from similar sources, in order to obtain some definite notion of the homes to which these cases will be removed, and the circumstances in which they, in their emancipated state, will be placed. This must be effected, not by any generalisation or opinion founded upon some vague and variable standard as to the favorable or unfavorable position of the class now so disposed of; but upon a description of some of the characteristic members of class itself, of their suitableness for partial independence; and of the

suitableness of private dwellings, however homelike and well conducted these may be, for their sphere of action.

Two hundred cases will be taken for this purpose, now resident in the south-eastern and some of the best cultivated and most prosperous districts of Scotland ; in fact, a majority of the pauper lunatics of these districts which are not included in the sweeping condemnation contained in the quotation from the Commissioners' Blue Books, at the commencement of these observations. But what and where are these private dwellings ? It will not do to form a fancy picture of a sylvan retreat, a cottage-home remote from public view for the majority are situate in towns and villages, and not necessarily the loveliest of the plain. This proportion may differ in various counties ; but it has been observed that the more distant from the haunts of men, and consequently from that supervision and criticism to which the haunts of men are more or less subjected, the less comfortable and creditable these dwellings are ; the greater the neglect, and, it is suspected, the greater active or passive harshness, to which their insane inhabitants are subjected. In villages they are generally the worst and smallest and most dilapidated houses obtainable ; in towns, they are single rooms in the second or third story, sometimes subterranean, in the columbaria in which the poorer classes are densely packed together. Nor must it be inferred from the mere comfort and judicious appointments for the sane inmates, that the management of the pauper lunatic is such as can be approved by a public inspector. Though much of the comfort may be due to his toil he may not share in the results, and may occupy the cellar, the garret, or the worst bed. Nor will facts bear out the pleasing theory that this is a productive, even an industrial class. A large number are idiots, advanced demented, aged, infirm and feeble, and are physically incapable of work of any kind, and where able they may be neither trustworthy, nor competent except as mere animals of burden. Those who combine capacity with a docile disposition are exposed to the danger of being overtaxed. They become what they have been, in irony, called—white slaves and drudges. In estimating the value of the labour of robust lunatics under discipline it has been customary to regard three as equivalent to an ordinary labourer. Falret regards the work of a lunatic as about the fifth of a sane individual of the same trade. But such rules cannot be fairly applied to the insane in private houses, as they are domiciled there because in general they are neither robust nor competent.

The asylum deliverance movement proceeds upon three assumptions :—1. That asylums should be employed chiefly, or exclusively, as hospitals for the treatment of acute cases, and that chronic cases may be beneficially withdrawn from them. 2. That chronic cases may be better disposed of elsewhere, better for themselves, and espe-

cially better for those who pay the public burdens ; and 3, That the cottage life in Britain is so happy, harmonious, parental, pure and comfortable, that it will be found to supply the homes and sana-toria to which the incurable and inoffensive and industrious insane may be transferred. We would deal with the latter aspect of the question.

In passing through the sad, and, even when well ventilated, the oppressive and cheerless wards of an hospital, we encounter many incurable patients ; many incapable of receiving direct aid from drugs ; many who sigh for emancipation from rigid rule and discipline ; and many who crave emancipation even from the treatment undertaken to restore them to health. It is, however, probable that very few of these, although failing to obtain the cure they seek, do not derive some benefit from the position from which they desire to escape—some alleviation of suffering, some brief arrestment of the downward course, some comfort, some professional or humane attention, of which the coveted emancipation would deprive them. The same observations apply to the occupants of an asylum. Many of these are in the advanced stages of disease and degeneration ; they are beyond the reach of art and sympathy ; they are entrusted to the charge of official guardians, because they have out-lived, because their offensive and disgusting habits have worn out and exhausted, the natural ties and duties of kindred ; or they are robust industrious, under the omnipotence of discipline, and inoffensive, and they prate of liberty and home and independence, as if they comprehended the terms and could undertake the responsibilities which these imply. Yet, if not doubtful, it is worthy of consideration whether such individuals are not *what* they are in virtue of the *where* they are ; whether they could secure the same amount of reason, happiness, and comfort under any other circumstances ; and whether, while no one gainsays that they might be domiciled elsewhere, in the same sense that the hospital incurable might live and die at home, they are not in that position which is best for themselves and for the community from which they are outcasts.

A pernicious and absurd error has crept into the very initiative of this inquiry which vitiates the whole speculation. The proposition, or the general acceptance of the proposition, amounts to the domestication and utilization of lunatics in private dwellings ; and a utopia is conjured up where those who, under a different and sterner creed and regimen, would have been “fast bound in misery and iron” within the lofty walls of an asylum, now work, or wander about, or enjoy freedom, fresh air, and country doings. It is a startling comment upon this picture, that of lunatics, properly so called, there is merely a vestige in the less inviting reality, as it is presented in Scotland, and that the vast majority of the insane, so

emancipated, consist of dwarfed, deformed, juvenile idiots ; dreamy, aged and feeble dementes ; and useless, or only partially useful, imbeciles. The following table will illustrate this. Of those examined there laboured under

|                        |   | Males. | Females. | Total. |
|------------------------|---|--------|----------|--------|
| Idiocy                 | . | 37     | 24       | 61     |
| Imbecility             | : | 34     | 25       | 59     |
| Dementia               | : | 15     | 21       | 36     |
| Chronic Mania          | : | 4      | 5        | 9      |
| Recurrent Mania        | : | 1      | 1        | 2      |
| Monomania of Suspicion | : | 1      | 1        | 2      |
| Melancholia            | : | —      | 3        | 3      |
| Dipsomania             | : | 1      | —        | 1      |

But these numbers must suffer a considerable diminution by deducting the unfortunates who are physically incapacitated from rationally or freely participating either in the pleasures or labours of freedom. Twenty-two are confined to bed; twenty cannot walk; six are lame from dislocation of hip and other causes; eight totter or stagger during locomotion; eleven fall from syncope or other causes; four bear the marks of bruises and burns on their body; thirty-six, from inability, or disinclination, never leave the house either for exercise or any other object; eighteen do so rarely, and thirteen never go beyond the cottage garden. But even when in a state to go beyond the threshold, the capacity of many to take advantage of the privileges of their position must be greatly limited by infirmity and disease, as twenty-five are described as epileptic, eleven as paralytic, four as choreaic, seven as deaf, eight as being of imperfect vision, eleven as bronchitic and asthmatic, two as rheumatic, six as labouring under strumous sores, one under otorrhœa, one under incontinence of urine, and thirty-one as of dirty habits. Yet notwithstanding this sad catalogue of maladies and frailties, many are never visited by a medical man, others at rare and long intervals, the majority quarterly. Five, however, occasionally receive daily visits. Of the whole number only sixty-four were found employed, twenty-five in domestic work, four females in gardening, twelve in occasionally carrying messages, three in field work, three in sewing, and one in keeping a coal store, in chopping wood, as a bookseller, as a butcher, &c. It is very doubtful that above two or three could have maintained themselves, and only one actually did so: the work of a vast proportion was mere play. Even the romance of rurality, of the sights and sounds and smells and associations of country life, the sequestered cot, the upland farm, which have been cast around this scheme, must be sorely invaded if not dispelled, for of the two hundred visited one hundred and seventy-six lived in towns or hamlets, and only twenty-two in detached houses or farms, and one hundred and fifty in streets or by the side of the road. When the analysis is carried further, it is discovered that fifty-one live in dirty and confused houses, eight in others so foul

as to be unhealthy, that four live in solitude, ten in poor-houses ; that three have notorious erotic tendencies, one of whom has borne three illegitimate children ; that seven are drunkards, and one is a drunkard in intention, while four live under the guardianship of drunkards, and three under that of immoral persons. The qualifications of this class may further be conjectured from the wardrobe of their charges : we do not allude to the careful patch, the ingenious darning, for such are the fruits of industry as well as the confessions of "honest poverty," nor to the wind-ventilated tatterdemalion; but to eighteen demented with filthy, greasy, redolent clothes; to thirty-seven with dirty, untidy, neglected dresses ; to six stalwart idiots arrayed in petticoats ; to nineteen of whom the skin and person were uncleanly ; to one who is reported to have been naked for twenty-three years ; to forty-two of whom the bed and bedding were cold, comfortless, wretched ; and to three instances in which adult men occupy the same bed with their mothers. It cannot even be claimed as a merit of the "air libre" system in Scotland, that thirty-six go at large and to long distances, disappearing for days ; that seven roam within the boundaries of their native village ; that thirteen are so free as to be destructive ; eight so insubordinate under the mild dominion to which they are subjected, as to require, or at all events to receive, corporal castigation ; that five are exposed to one of the penalties of unrestricted liberty, in being molested and persecuted and struck by children, who are, however, stronger or more intelligent than themselves ; and five earn the designation of white slaves by toiling in the performance of the work of the family toward whose support they at the same time contribute their parochial allowances. We have not now examples of caged men. The bed of one lunatic was constructed and used as a cage. They have disappeared before the benign authority of the commissioners in lunacy, and have been absorbed among the decencies and comparative freedom of asylums ; but as substitutes we have the domestic oublie in the form of a box-bed ; the durance vile of solitude, or seclusion in a cottage, while the family are at harvest, or church, or market ; or the rope and the sheet which limit motion ; or the dread of bludgeon law, as in those cases above specified, in which its enforcement was admitted, and in many others where it is suspected but concealed, in recognition of the popular respect for humane treatment, which they practically disregard. And although the straps and strait jackets which at no distant period hung ostentatiously among the horse furniture upon cottage walls have disappeared, the wrists and ankles of individuals received into asylums within the current month prove that restraint, though banished from such establishments, is still resorted to, and is perhaps justifiably, or at all events unavoidably resorted to in the homes and by the friends of the insane.

Were any good purpose to be served by the description of what may fairly be designated sensational cases, such as those of Flushing and Earl Soham, neglect and harshness could be demonstrated to exist, especially in the class of peasantry immediately above, but on the verge of, pauperism ; where are the irresponsibility of private life, many motives for concealment, and many more for penurious provisions, in fact where the evils and vices, as well as the virtues of the "patronage familial" flourish in rank and unrestrained luxuriance. We prefer to present such illustrations as occur under public inspection, or that faint infrequent supervision which is practicable, which appear inherent to the general development of such a measure, and which could not occur in an hospital, or which, if they did occur, would, at once, be corrected. It is not even proposed at present to embrace the effects of such an arrangement upon the mental or moral condition of its objects ; but to present what is palpable, inevitable, and irremediable in their position, surroundings, and supposed privileges.

There are many happy and well-constituted homes among the thousands which contain an insane inmate ; these are the expression of the best elements of the national character, of individual manifestation, and of a sense of propriety, good feeling, and good taste. They have always been good ; and will, in spite of privations and bad seasons and bad houses, continue clean, cosy, and judiciously administered. The dispositions of the population of Gheel are said to be the result of a thousand years' training and consuetude ; and the few glimpses of national philanthropy and higher culture which may be obtained among the peasant custodians of the insane in this land, are, assuredly, *not* to be traced to annual, or occasional visits of some few minutes' duration, by Inspectors of poor and other officials, but to idiosyncracies, or principles enshrined in our common nature, and to be found whenever and wherever circumstances favour their development. That supervision and instruction and example have influenced, and will influence, the growth and extension of the comfort and decencies of cottage life, cannot be doubted ; and that such agents should be kept in constant operation is indispensable ; but for ages to come such machinery must be powerless against prejudices, peculiarities of race, habit, &c. ; and must leave the good and bad cases of domestic treatment of lunatics, in almost all important respects, where it found them. When civilization, and a higher standard of living, and a keener appreciation of minor morals shall have penetrated more deeply into the substrata of society, to the indigent and industrial classes, and assimilated cottage interiors and management to the infirmities and habits and requirements of the insane, the substitution of private dwellings for public hospitals for certain classes of the insane as a general economic and national measure may be useful, as well as practicable ; whereas, a

present, it can only be regarded as an evil which it is a public duty to mitigate as much as may be possible.

*Roman Catholic Middle Class Lunatic Asylums.*

THERE is no hospital or asylum at all for Catholic patients of moderate or limited means, where they would be cared for by members of their own faith, or visited by a priest, though there are probably at least 700 Catholic lunatics in England, by whom such an establishment is needed. The question is, as we have said before, are Catholics prepared to permit this state of things to continue? What have they done, or what are they willing to do, to remedy it? We may be quite sure, now that attention has been called to the existing want of middle-class accommodation for lunatics, that suitable hospitals will be quickly forthcoming; indeed, with an enterprising energy which does them honour, efforts in that direction have already been made by numerous individuals; plans have been drawn out, the necessary calculations have been made, and we may expect soon to see the visible fruits of their labours. But it should be distinctly understood, that the promoters and organisers of such schemes being Protestants, there will not be the smallest element of Catholic control in carrying them out, neither will the poorer patients of our own faith be one whit benefited by such measures. It may here be stated, that in insanity, more frequently than in almost any other disease, there is a quiet and lucid interval just before death; is it right that we should by neglect prevent these our poorer brethren, so afflicted on earth, to depart this life with none near to offer the last rites of the Church? Will Catholics still sit with their arms folded and do nothing in this matter? It is true that a minority, which has long been treated with severity and injustice, is apt to degenerate into a chronic state of apathy and almost hopelessness; but it is an evil sign when the vanquished become as the dead. In the sister island, Government has hitherto, we regret to say, thought it expedient to deny us a charter for our University; it will, we venture to hope, not refuse us a license for our lunatic asylums.

Our object in this article is to propose a practical scheme by which lunatic hospitals for the middle and poorer classes of Catholics may be erected, and made, not only self-supporting, but a reasonably lucrative investment, and also form a basis for further operations, and be the foundation of a fund to which the charitable contributions of the rich should be solicited. These contributions should form an endowment for the reception, support, and cure of poor but deserving cases. The hospital, duly licensed, would of course be under the supervision of the Commissioners in Lunacy; but the patients would be the especial charge of members of a religious order,

and the medical and sanitary departments should be under the superintendence of some thoroughly well-qualified physician.

A very able and practical treatise on the subject has been published by Dr. C. L. Robertson, superintendent of the Sussex Lunatic Asylum, Hayward's Heath. It was originally read before the Brighton and Sussex Medico-Chirurgical Society ; was afterwards printed in the 'Journal of Mental Science ;' and contains many excellent suggestions, of which we gladly avail ourselves. As he truly remarks, what our middle-classes require in this matter is not alms, but organised co-operation ; and it is this which Catholics should endeavour to supply, so as to aid and benefit the many hundreds of poor Catholic lunatics. Lord Shaftesbury, the chairman of the Board, states that if the guarantee of the county rates could be given, hospitals of this kind would unquestionably be self-supporting ; that by taking a mixed class of patients at graduated rates the payments would not only carry on the operations of the institution, provide for all expenses, salaries, &c., but would in thirty years (discharging the interest meanwhile) liquidate the principal of the building account. But, though granting the guarantee of the county rates is an experiment which would not really cost the outlay of one farthing, we fear it would be useless to try to establish a precedent of the kind in favour of Catholics. To their own zeal, enterprise, and sagacity only they must look ; and the provisions of the Limited Liabilities Act seem to offer a safe and available channel for operations. At the most moderate computation it may be supposed that there are between 600 and 700 Catholic lunatics in the country, omitting the naval, military, criminal, and pauper patients. To these must be added many who are to our own knowledge placed in foreign asylums expressly that they may be under the care of those of their own faith. It is reasonable to believe that if similar advantages could be offered here on moderate terms, the relatives of these patients would prefer their being placed in England. Let us, however, to be on the safe side, calculate on receiving something less than two thirds of this number. What we require for this is two hospitals in the northern part of England, each able to accommodate 120 patients ; the one for males, the other for females ; and two of similar proportions in the south or south-western district. Lancashire for many reasons seems the most suitable county for the first-named ; and for the southern one the suitability of a site and the price of land would guide the selection.—*The Month, a Magazine of Literature, Science, and Art.* April, 1865.

*Dr. Maudsley on the Distinction between Genius and Work.*

BEFORE concluding this chapter it is necessary distinctly to affirm a truth which is an unwelcome one, because it flatters not the self-

love of mankind ; and it is this, that there is all the difference in the world between the gifted man of genius, who can often anticipate the slow results of systematic investigation, and who strikes out new paths, and the common herd of mortals, who must plod on with patient humility in the old tracks, "with manifold motions making little speed ;" it is the difference between the butterfly which flies and feeds on honey and the caterpillar which crawls and gorges on leaves. Men, ever eager to "pare the mountain to the plain," will not willingly confess this ; nevertheless it is most true. Rules and systems are necessary for the ordinarily endowed mortals, whose business it is to gather together and arrange the materials ; the genius, who is the architect, has, like nature, an unconscious system of his own. It is the fate of its nature, and no demerit, that the caterpillar must crawl ; it is the fate of its nature, and no merit, that the butterfly must fly. The question, so much disputed, of the relative extent of applicability of the so-called inductive and deductive methods, often resolves itself into a question as to what manner of man it is who is to use them—whether one who has senses only, who has eyes and sees not, or one who has senses and a soul ; whether one who can only collect so-called facts of observation, or one who can bind together the thousand scattered facts by the organizing idea, and thus guarantee them to be facts. What an offence to the chartered imbecility of industrious mediocrity that Plato, Shakespeare, Goethe, Humboldt, Bacon too, and, in truth, every man who had anything of inspiration in him, were not mere sense-machines for registering observations, but rather instruments on which the melody of nature, like sphere-music, was made for the benefit and delectation of such as have ears to hear ! That some so virulently declaim against theory is as though the eunuch should declaim against lechery : it is the chastity of impotence.

So rarely, however, does nature produce one of these men gifted with that high and subtle quality called genius—being scarce, indeed, equal to the production of one in a century—and so self-sufficing are they when they do appear, that we, gratefully accepting them as visits of angels, or much as Plato accepted his super-celestial ideas, need not vainly concern ourselves about their manner of working. It is not by such anxious troubling that one will come ; it is not by introspective prying into and torture of its own self-consciousness that mankind evolves the genius ; the mature result of its unconscious development flows at due time into consciousness with a grateful surprise, and from time to time the slumbering centuries are thus awakened. It is by the patient and diligent work at systematic adaptation to the external by the rank and file of mankind ; it is by the conscientious labour of each one, after the inductive method, in that little sphere of nature, whether psychical or physical, which in the necessary division of labour has

fallen to his lot—that a condition of evolution is reached at which the genius starts forth. Tiresome, then, as the minute man of observation may sometimes seem as he exults over his scattered facts as if they were final, and magnifies his molecules into mountains as if they were eternal, it is well that he should thus enthusiastically esteem his work ; and no one but will give a patient attention as he reflects how indispensable the humblest unit is in the social organism, and how excellent a spur vanity is to industry. Not unamusing, though somewhat saddening, is it, however, to witness the painful surprise of the man of observation, his jealous indignation and clamorous outcry, when the result at which he and his fellow-labourers have been so patiently, though blindly, working—when the genius-product of the century which he has helped to create, starts into life—when the metamorphosis is completed : amusing, because the patient worker is supremely astonished at a result which, though preparing, he nowise foresaw ; saddening, because individually he is annihilated, and all his toil for which he spent is swallowed up in the product which, gathering up the different lines of investigation and thought, and giving to them a unity of development, now by epigenesis ensues. We perceive, then, how it is that a great genius cannot come save at long intervals, as the tree cannot blossom but at its due season.

But why should any one, great or little, fret and fume because he is likely soon to be forgotten ? The genius himself, as individual, is after all of but little account ; it is only as the birth of the travailing centuries that he exists, only so far as he is a true birth of them and adequately representative, that he is of value : the more individual he is the more transitory will be his fame. When he is immortal he has become a mere name marking an epoch, and no longer an individual. Whosoever, in a foolish conceit of originality, neglects the scattered and perhaps obscure labours of others who have preceded him, or who are contemporaneous with him ; whosoever, over-careful of his individual fame, cannot carry forward his own evolution with a serene indifference to neglect or censure, but makes puerile demands on the approbation of the world—may rest content that he is not a complete birth of the age, but more or less an abortive monstrosity : the more extreme he is as a monstrosity the more original must he needs be.

Viewing mental development, whether in the individual or in the race, as a process of organization, as the consummate display of nature's organic evolution, and recognising, as we must do, the most favorable conditions of such evolution to be the most intimate harmony between man and nature, we may rightly conclude, as far as concerns the rule of a conscious method of inquiry, with the ancient and well-grounded maxim—"Learn to know thyself in nature, that so thou mayest know nature in thyself."—*On the Method of the Study of Mind ; an Introductory Chapter.*

*Circular by the Commissioners in Lunacy.*

OFFICE OF COMMISSIONERS IN LUNACY,  
19, WHITEHALL PLACE; 3rd May, 1865.

THE Commissioners in Lunacy have reason to believe that the Copies of Documents on the admission of patients which are forwarded to their office differ frequently, some in very minute particulars, others in more important respects, from the originals.

The Commissioners cannot too strongly impress upon Superintendents of Asylums, Proprietors of Licensed Houses, and other persons concerned in the copying and transmission of such documents, that the law requires that the copies should be in every point, even to the smallest and apparently unimportant errors of orthography, exact transcripts or fac-similes of the originals, and that unless this be strictly complied with the copies cease to have any value.

It is absolutely necessary that these documents should be forwarded within the time prescribed by law. Any amendment which it is found impossible to make within this period must be made, subsequently, within the 14 days limited by law for such amendment.

All alterations in the original certificates, unless by the certifying medical men, invalidate them; and the initials of the latter must be placed to every change or addition made.

By order of the Board,

W. C. SPRING RICE,  
*Secretary.*

*Publications Received.*

'Du Suicide, et de la Folie Suicide.' Par A. Brierre de Boismont. Deuxième édition, revue et augmentée. Paris, 1865, pp. 763. *See Part II, Reviews.*

'Manual of the Turkish Bath.' Heat a Mode of Cure and a Source of Strength for Men and Animals. From writings of Mr. Urquhart. Edited by Sir John Fife, M.D., F.R.C.S., Senior Surgeon to the Newcastle Infirmary,' pp. 419. John Churchill and Sons, New Burlington Street, 1865. *See Part II, Reviews.*

Du Bain Turc modifié par l'emploi du calorique rayonnant et de son introduction en Suisse,' par L. A. Gosse, père, Docteur en Médecine. Genève, 1865, pp. 150. *See Part II, Reviews.*

'Thermæ Romano-Britannicæ, or Ancient Roman Baths found in Italy, Britain, France,' &c. With Notices of the Mosaics and Paintings which formed a part of their Decorations. By Robert Wollaston, M.D., Member

of the Royal College of Physicians, London; Member of the Archaeological Institute, London. London: Robert Hardwicke, 192, Piccadilly, 1864. *See Part II, Reviews.*

'On the Method of the Study of the Mind: an Introductory Chapter to a Physiology and Pathology of the Mind.' By Henry Maudsley, M.D. Lond., Physician to the West London Hospital, Joint Editor of the 'Journal of Mental Science.' John Churchill and Sons, New Burlington Street, 1865 (pamphlet). *See Part III, Quarterly Report on the Progress of Psychological Medicine.*

'On the Urine of the Insane: a Contribution to Urology.' By Adam Addison, L.R.C.P. and S. Edin., Resident Medical Officer, Montrose Royal Lunatic Asylum. Reprinted from the 'British and Foreign Medico-Chirurgical Review' for April, 1865. *See Part III, Quarterly Report on the Progress of Psychological Medicine.*

'Seventh Annual Report of the General Board of Commissioners in Lunacy for Scotland.' Presented to both Houses of Parliament by command of Her Majesty. Edinburgh, 1865. (*This Report will be reviewed in our October number.*)

'Clinical Lectures and Reports by the Medical and Surgical Staff of the London Hospital.' Vol. I, 1864. London: John Churchill and Sons, 1865, pp. 517.

A handsome well edited volume containing the following contributions:—Aneurism of Innominate, &c. (Lithograph) by Dr. Davies. On Leucoderma (coloured lithograph), Mr. Hutchinson. On True Leprosy, Mr. Hutchinson. On Cerebral Amaurosis, Mr. Hutchinson. Extracts from Clinical Lectures, Mr. Hutchinson. On the Treatment of Polysarcia, Dr. Down. On Hospital Gangrene, Mr. Maunder. On Treatment of Stricture, Mr. Maunder. Cases of Ligature of Arteries. Mr. Maunder. Rare Cases of Fracture of the Vertebræ, Mr. Curling. On the Study of Diseases of the Nervous System, Dr. Hughlings Jackson. On the Treatment of Scarlet Fever, Dr. Down. On Relapsing Pemphigus, Mr. Hutchinson. On a case of Hernia, Mr. Couper. Surgical Gold Medal Cases (Various). Gleanings in Medicine, Dr. Andrew Clark. On Still-birth, Dr. Barnes and Mr. Heckford. The Statistics of the Maternity Department, Dr. Barnes and Mr. Heckford. Miscellaneous Cases, Dr. Woodman. Surgical Notes on the Schleswig Campaign, Mr. Little. Dislocation of Lower Jaw, Mr. Couper. Treatment of Rheumatic Fever, Dr. Davies. On Hemiplegia on the right side with Loss of Speech, Dr. Hughlings Jackson. Illustrations of Diseases of the Nervous System, Dr. Hughlings Jackson. Cases of Disease of the Heart, &c., Dr. Ramskill. Cases of Algesia and Hyperesthesia, Dr. Ramskill. Statistics of the Hospital for 1863, Dr. Powell.

'Vital and Economical Statistics of the Hospitals, Infirmaries, &c., of England and Wales for the Year 1863.' By Fleetwood Buckle, M.D., F.R.C.P. Lond., House Surgeon, West Norfolk and Lynn Hospital. John Churchill and Sons, New Burlington Street (pamphlet).

*Dr. Buckle here gives us a valuable series of comparative tables illustrating the internal economy of the various medical charities in the kingdom. This collection of facts is most valuable to all interested in the government of medical establishments, such as hospitals, asylums for the insane, workhouse infirmaries, &c., &c.*

'The Optical Defects of the Eye.' By J. Z. Lawrence, F.R.C.S., M.B. Lond., Surgeon to the Ophthalmic Hospital, Southwark. CONTENTS:—Optics—Physiological Optics—Myopia—Hypermetropia—Astigmatism—

Presbyopia—Paralysis of Accommodation—Asthenopia—Strabismus. London : Robert Hardwicke, 192, Piccadilly, 1865, pp. 112.

'Anniversary Address' delivered before the Anthropological Society of London, January 3rd, 1865, by James Hunt, Ph.D., &c., &c. Printed for Private Circulation, 1865.

'A Letter to the Members of the British Medical Association, on the Subject of their Future Journal.' By Robert B. Carter, F.R.C.S. (pamphlet).

'An Address to the Working Classes of Salisbury,' delivered 23rd March, 1865, to Close the First Session of the Penny Readings. By J. Stevenson Bushnan, M.D. Salisbury : Frederick A. Blake, Market Place, 1865.

'Notes on a Case of Suicidal Mania,' read at Clifton, April, 1865, before the Bath and Bristol Branch of the British Medical Association. By James George Davey, M.D. &c., &c., &c. Bristol : 1865 (pamphlet).

### *County Asylum Reports, 1864.*

1. The Annual Report of the Dorset County Lunatic Asylum, Charlminster, Dorsetshire, for the year 1864.

2. Report of the Committee of Visitors of the Lunatic Asylum for the City and County of Bristol, as presented to the Town Council, on the 1st January, 1865, together with the Reports of the Medical Superintendent and Chaplain.

3. Lunatic Asylum for the County and Town of Nottingham. The Coppice near Nottingham (supported by voluntary contributions), into which Patients, not being Paupers, are received, who are unable to pay the whole expense of their care and maintenance. Ninth Annual Report, 1864.

4. Seventh Annual Report of the Committee of Visitors of the Cambridge-shire, Isle of Ely, and Borough of Cambridge Pauper Lunatic Asylum, for the year ending the 31st December, 1864. With Appendices.

5. Essex Lunatic Asylum Reports and other Documents, printed by order of the Court of Quarter Session, 3rd January, 1865.

6. The Ninth Annual Report of the state of the United Lunatic Asylum for the County and Borough of Nottingham, and the fifty-fourth of the original Institution, formerly the General Lunatic Asylum, 1864.

7. The Report of the Committee of Visitors, Superintendent and Chaplain of the Cheshire Lunatic Asylum, made to the Court of General Quarter Sessions of the Peace, holden at Nether Knutsford in and for the County of Chester, on Monday, April 10th, 1865.

8. The Report of the Northampton General Lunatic Asylum, from January 1st, 1864, to December 31st, 1864; also the State of the Accounts for the year.

9. 1864. Forty-fifth Annual Report of the Cornwall Lunatic Asylum, established at Bodmin, A.D. 1820, presented to the Magistrates in Quarter Sessions, on Tuesday, January 5th, 1865.

10. Annual Report of the Committee of Visitors of the Surrey Lunatic Asylum.

11. St. Luke's Hospital for Lunatics, established A.D. 1751. Reports for the year 1864.

12. The Sixteenth Annual Report of the North Wales Counties Lunatic Asylum, Denbigh, for the year 1864.

13. Cumberland and Westmoreland Lunatic Asylum, Annual Report for the year 1864.

14. Report of the Committee of Visitors of the Lunatic Asylum for the North and East Ridings of Yorkshire; with the Superintendent's Eighteenth Annual Report, presented at the Easter Sessions, 1865; and an Account of the Receipts and Payments to the end of the year 1864.
15. The Warneford Asylum, Headington Hill, near Oxford. Thirty-eighth Annual Report of the Committee of Management, for the year ending December 31st, 1864.
16. Report of the County Lunatic Asylum at Prestwich, presented to the Court or Adjourned Annual Session, December 29th, 1864, with the Accounts of the Receipts and Payments of the Treasurer of the said Asylum.
17. The Fourteenth Annual Report of the Committee of Visitors of the County Lunatic Asylum at Colney Hatch, January Quarter Session, 1865.
18. Report of the Medical Superintendent, with the Accounts of the Treasurer of the Norfolk Lunatic Asylum, for the year 1864.
19. Twentieth Annual Report of the Medical Superintendent of the Lunatic Asylum for the County of Salop and Montgomery, and for the Borough of Wenlock, 1864.
20. Twenty-seventh Annual Report of the Suffolk Lunatic Asylum, 1865.
21. Third Report of the Farnham House Private Lunatic Asylum, near Dublin, established A.D. 1814.
22. Report respecting the past and present state of Brislington House, near Bristol, a Private Asylum for the Insane. By Francis and Charles Fox, M.D. Cantab.
23. County Lunatic Asylum, Stafford. Forty-sixth Report, for the year 1864.
24. Fourteenth Annual Report of the Wilts County Asylum, Devizes, for the year 1864.
25. Seventeenth Annual Report of the Somerset County Pauper Lunatic Asylum, 1864.
26. Report of the Royal Lunatic Asylum of Montrose, for the year 1864. Instituted 1782.
27. Report of the Parent District Lunatic Asylum, Clonmel, for the year ending 31st December, 1864, by Dr. Flynn. Report of the Additional Lunatic Asylum, Clonmel, for the year 1864. By Dr. Edmundson.
28. Reports of the Committee of Visitors, and of the Medical Superintendent of the West Riding Pauper Lunatic Asylum, for the years 1863-4.
29. Littlemore Asylum. Superintendent's Report for 1864, with Statistical Tables.
30. Warwickshire County Pauper Lunatic Asylum. Annual Report of Dr. Parsey, resident Medical Superintendent, to the Committee of Visitors; also the Annual Report of the Committee of Visitors to the Court of Quarter Sessions, Epiphany 1865, and Financial Statement for the year 1864.
31. Twelfth Annual Report on the Buckinghamshire County Pauper Lunatic Asylum, presented to the Court at the Epiphany Session, 1865.
32. Kent County Lunatic Asylum, Barming Heath, Maidstone. Thirty-second year. Eighteenth Annual Report, 1864. Presented to the Committee of Visitors, 20th January, 1865, and to the Court of General Sessions, April, 1865.
33. Broadmoor Criminal Lunatic Asylum. Annual Report for the year 1864.
34. First Annual Report of the Perth District Asylum, Murthly, March, 1865.
35. Report of the County Lunatic Asylum at Rainhill, presented to the Court of Adjourned Annual Session, December 29th, 1864, with the Accounts of the Receipts and Payments of the Treasurer of the said Asylum.

36. Thirty-sixth Annual Report. By the Directors of James Murray's Royal Asylum for Lunatics, near Perth, June, 1863.
37. Nineteenth Annual Report of the Devon Lunatic Asylum, 1864.
38. Hants County Lunatic Asylum. Report, 1864.
39. The Fourteenth Annual Report of the Committee of Visitors of the Lunatic Asylum for the Borough of Birmingham, 1864.
40. Annual Report of the Royal Edinburgh Asylum for the Insane, for the year 1864.
41. Leicestershire and Rutland Lunatic Asylum. The Sixteenth Annual Report of the United Committee of Visitors, being the Report for the year 1864.
42. General Reports of the Royal Hospitals of Bridewell and Bethlem, and of King Edward's School, 1864.
43. Sussex County Lunatic Asylum, Hayward's Heath. Sixth Annual Reports, 1864.
44. The Asylum for Idiots. Instituted October 27th, 1847. Incorporated by Royal Charter, 1862. Report, 1865.
45. The Twentieth Report of the Committee of Visitors of the Middlesex County Lunatic Asylum, at Hanwell. January Quarter Session, 1865.
46. The Twelfth Annual Report of the Lincolnshire County Lunatic Asylum at Bracebridge, near Lincoln, 1865.
47. Richmond District Lunatic Asylum, Dublin. Report of the Resident Medical Superintendent for the year 1864. Ordered of the Board of Governors to be printed, 7th February, 1865.
48. Seventh Annual Report of the Medical Superintendent of the Provincial Hospital for the Insane, Halifax, Nova Scotia, printed by Order of the Board of Works.
49. Report of the Pennsylvanian Hospital for the Insane, for the year 1864. By Thomas S. Kirkbride, M.D., Physician in Chief and Superintendent. Published by order of the Board of Managers.
50. Annual Report of the Trustees and Superintendent of the State Lunatic Hospital of Pennsylvania, 1865.

### *Appointments.*

C. Berrell, M.R.C.S., has been appointed Assistant Medical Officer to the Warwick County Lunatic Asylum.

J. C. Browne, M.D. Edin., Assistant-Physician to the Warwick County Lunatic Asylum, has been appointed Medical Superintendent of the Newcastle-upon-Tyne Borough Lunatic Asylum.

Frederick Lewins, M.D. St. Andrew's, has been appointed Assistant Medical Officer of the Sussex Lunatic Asylum, Hayward's Heath.

Thomas Lyle, L.R.C.P. Lond., has been appointed Medical Superintendent of St. Thomas's Hospital, Exeter.

Francis Skae, M.D. Edin., has been appointed Assistant Medical Officer of the Borough Asylum, Birmingham.

*Obituary.*

## DR. WILLIAM VALENTINE BROWNE.

"THIS gentleman, who was assistant medical officer of the Sussex Lunatic Asylum, Hayward's Heath, died on the 17th May. In early life he had been engaged in general practice, and during part of the Crimean war he served at Scutari. The last five years of his life were assiduously devoted to lunacy practice in the Sussex Asylum. He died in the fortieth year of his age, and his remains are interred at Cwm, North Wales. His unremitting fidelity and soundness of judgment in discharging the responsible duties of his trust, rendered him invaluable as a colleague. His courteous and unassuming demeanour, genuine sympathy with suffering, singular modesty of character, delicacy of feeling and uprightness gained for him more than the respect of those who knew him. As a Christian gentleman, a judicious and attentive physician, a courteous and faithful colleague, and a kind friend, his memory will be long affectionately cherished in the recollection of those among whom he so lately lived and laboured.—'Lancet,' June 10th.

Dr. Browne was a graduate of the University of St. Andrews, and a member of the Association of Medical Officers of Asylums and Hospitals for the Insane.

The Commissioners in Lunacy paid an official visit to Hayward's Heath the day Dr. Browne died, and they made the following entry in the Visitors' Book regarding this sad event:

"We yesterday made an official inspection of this asylum, and we are sorry to report that Dr. Browne, the Assistant Medical Officer, died early in the morning of that day from an attack of paralysis. It is feared that his death was hastened by his unceasing attention to the duties of his office. Many of the patients expressed to us their regret at his loss, and said that he had always shown them the greatest kindness. The attack of paralysis, of which Dr. Browne died, took place on Sunday last, the 14th instant, and as it most unfortunately happened that Dr. Robertson was absent on leave, it became necessary at once to secure medical supervision for the patients, and Dr. Maudsley, of London, was soon after in attendance.

The following *extract* from a sermon preached by the Rev. H. Hawkins, in the Sussex Asylum Chapel, on the Sunday following Dr. Browne's death, and which, at the request of the household, has been printed for private circulation, may not be deemed out of place here:

"Last Sunday afternoon, in the midst of that work of charity which it is well to do on the Sabbath day, was smitten down by a stroke of that malady which daily he sought to ward off from, or to relieve in, others around him, one whose name and memory will be long cherished here. In the place where he was accustomed to prepare healing medicines for his suffering brethren, his weary body sunk down to that rest to which his God summoned him. His sun is gone down while it is yet day, but when it was setting it found him at his work. He failed on a Sunday when the collect's prayer is that 'among the sundry and manifold changes of the world our hearts may surely there be fixed where true joys are to be found.' For a brief interval he lingered, long enough to give evidence of his patience, remembrance of others, sense of sin, thought of God—and then his quiet spirit returned to the Father who created it, the Son who redeemed it, the Holy Ghost who sanctified it. . . . .

"Perhaps nothing was more remarkable in our departed friend's character than his *trustworthiness*. He was, in a very marked manner, true to his trust. He

was (ourselves being witnesses) scrupulously faithful to his stewardship. Duty was his first object. Nothing tempted him to neglect or to slur it over. Ever at his post, no emergency, however unexpected, could arise for which he was not instantly ready. Denying himself even those brief intervals of rest which he might fairly have claimed, he was to be found, month after month, at his station, prepared for each successive demand of duty. His was no eye-service. He could thoroughly be relied on. With unvarying regularity and careful attention he discharged each day's obligation with a precision on which those about him could always depend.

"Another noticeable feature in his disposition was his *unassuming modesty*. His nature was very retiring. In days when self-assertion is considered to be a necessary condition of success; when, if a person wishes to get on in the world, as it is called, it is thought that he must have a good opinion of himself, and push his way, it is not common to meet with one who spoke so little of himself, and kept so much in the shade. He that is gone, though of mature years and much experience, was unpretending and diffident, almost to a fault.

"A word as to his *kindliness and sympathy*. There is probably no one here, who came under his charge, who has not received at least a considerate, feeling word from the good physician whose place among us knows him no more. And how many here have recalled not kind words only, but gentle attention and benevolent deeds at his hands! Much, it may be said, was in the way of his duty; but how much there is in the manner of doing things. Real sympathy is beyond price. He always spoke as one who not only knew about the cases of the sick and suffering, but felt for their condition. Even at the last, in intervals of consciousness, he showed that he was not unmindful of others.

"But, after all, 'one thing is needful.' Unless a true religious principle influence what we do, our natural good qualities are nothing worth. Now, there is good and comfortable ground of hope that our departed brother was guided and governed by a principle of sound yet unobtrusive piety. The root of the matter appeared to be in him. Motives higher and purer than those of earth directed his way. He lived in remembrance of his accountability to God. We are witnesses of the regularity with which he was in the habit of frequenting this afternoon Sunday service, and his devotional behaviour in the Lord's House testified to his recollection of the Divine Presence in which he was standing. On the very last occasion when the Sacrament of the Lord's Supper was administered, he joined his brethren in Holy Communion.

"And now, suddenly, his living presence has departed from our midst. His earthly life has gone by like a shadow. To-morrow his body will be laid in his own distant native land. We might have wished that his remains could have been placed where sometimes we might have looked upon his grave. However, the remembrance of his example will remain. Not soon will the name of one who was singularly faithful in trust, unassuming and modest, feeling and considerate, and ever open-handed, be unremembered.

"The Christian gentleman, the trustworthy public servant, the faithful colleague, the kind-hearted physician, fellow-worker, and friend has gone, we humbly trust, to his rest.

"You, my friends, are judges if anything that has been said has savoured of flattery, or has exceeded the proportions of sober truth. What is earthly blame to him now, or earthly praise? He has passed beyond the reach of both. His sensitive spirit in life was not indifferent to either. But now man's opinion is nothing to him. 'To his own Master he standeth or falleth.' And for ourselves, let us be warned by this fresh instance of life's uncertainty. What a forcible comment has the sad event of the past week been on those words of the sacred writer—'Ye know not what shall be on the morrow. For what is your life? It is even a vapour that appeareth for a little time, and then vanisheth away.'"

At a meeting of the visitors held at Hayward's Heath, on the 24th June, it was determined to place in the Asylum Chapel, at the cost of the county, a mural tablet, in memory of Dr. Browne's tried and faithful services.

*Notice to Correspondents.*

English books for review, pamphlets, exchange journals, &c., to be sent either by book-post to Dr. Robertson, Hayward's Heath, Sussex; or to the care of the publishers of the Journal, Messrs. Churchill and Sons, New Burlington Street. French, German, and American publications may be forwarded to Dr. Robertson, by foreign book-post, or to Messrs. Williams and Norgate, Henrietta Street, Covent Garden, to the care of their German, French, and American agents, Mr. Hartmann, Leipzig; M. Borrari, 9, Rue de St. Pères, Paris; Messrs. Westermann and Co., Broadway, New York.

The copies of *The Journal of Mental Science* are regularly sent by Book-post to the Members of the Association, and to our Home and Foreign Correspondents, and we shall be glad to be informed of any irregularity in their receipt.

*United States of America.*—We are frequently compelled to refuse *American Asylum Reports*, on which an extra postage of 8d. is demanded. Messrs. Westermann, Broadway, New York, will forward any parcels for the 'Journal of Mental Science,' addressed to the care of Messrs. Williams and Norgate, London.

The following EXCHANGE JOURNALS have been regularly received since our last publication :

The *Annales Medico-Psychologiques*; the *Zeitschrift für Psychiatrie*; the *Correspondenz Blatt, der deutschen Gesellschaft für Psychyatrie*; *Archiv für Psychiatrie*; the *Irren Freund*; *Journal de Médecine Mentale*; *Archivio Italiano per le Malattie Nervose e per le Alienazioni Mentali*; *Medizinische Ahrenlese*; *Medizinische Jahrbücher*; *Zeitschrift der K. K. Gesellschaft der Aerzte in Wien*; the *Edinburgh Medical Journal*; the *American Journal of Insanity*; the *British and Foreign Medico-Chirurgical Review*; the *Dublin Quarterly Journal*; the *Medical Mirror*; the *Ophthalmic Review: a Quarterly Journal of Ophthalmic Surgery and Science*; the *British Medical Journal*; the *Medical Circular*; and the *Journal of the Society of Arts*; the *Morningside Mirror*.

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*Notice of any alteration required in the above List to be sent to the Honorary Secretary, 37, Albemarle Street, W.*



## THE JOURNAL OF MENTAL SCIENCE, OCTOBER, 1865.

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# THE JOURNAL OF MENTAL SCIENCE.

No. 55.

OCTOBER, 1865.

VOL. XI.

## PART I.—ORIGINAL ARTICLES.

*Remarks on a recent attempt at the Comparative Statistics of Bethlehem Hospital and of the English County Asylums.* By C. LOCKHART ROBERTSON, M.D. Cantab.; Medical Superintendent of the Sussex Lunatic Asylum, Haywards Heath.

(Read at the Annual Meeting of the Medico-Psychological Association, held at the Royal College of Physicians, July 13th, 1865.)

MR. PRESIDENT AND GENTLEMEN,—In the annual report of the resident physician of Bethlehem for 1864 the following observations on the comparative statistics of Bethlehem Hospital and the English County Asylums occur:—

The attention of the Governors and of all those interested in obtaining accurate information on the important question of the cure of the insane is earnestly requested to the following statistics collected by Mr. James Ellis, Medical Superintendent at St. Luke's Hospital, from the admissions into forty-four public asylums in the united kingdom, and from actual returns from each asylum. It shows the total number of patients received into each institution, and distinguishes *those which would be from those which would not be admitted into Bethlehem Hospital*. It also shows the numbers and percentage of the cures and deaths of such admissible patients during the first year of residence. [Here follows Mr. Ellis's table.]

Table of per-centages, 1860.

| CURES.                           |                 | DEATHS.                             |
|----------------------------------|-----------------|-------------------------------------|
| Bethlehem . . .                  | 52·02 per cent. | Home Counties . . . 13·54 per cent. |
| Home Counties . . .              | 38·86 ,,,       | Bethlehem . . . 5·05 ,,,            |
| Or in favour of }<br>Bethlehem } | 13·16 per cent. | Or in favour of }<br>Bethlehem }    |
|                                  |                 | 8·49 per cent.                      |

Thus it will be seen that the treatment pursued at Bethlehem Hospital  
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has proved eminently successful, particularly when it is borne in mind that our per-cent-age of cases during 1860 (the year for which these returns were compiled) was exceptionally low, lower, in fact, than it had been in any of the preceding ten years. Notwithstanding this, however, the cures in Bethlehem are at the rate of nearly 10 per cent. higher, and the death-rate is 7 per cent. lower than the average of the forty-four asylums from which returns were obtained. *These facts distinctly show the situation of Bethlehem Hospital cannot be unhealthy, and that its natural advantages are very great.*

I ask your leave to offer a few remarks on this attempt at the comparative statistics of Bethlehem Hospital and of the English county asylums.

It would be beyond my limits to discuss to-day the principles which are admitted on all sides to regulate inquiries into the statistical results of the treatment of the insane. This subject has been already handled in a masterly manner by one who, on two former occasions, occupied the President's chair at these annual meetings, and it is no strained compliment for me to say that Dr. Thurnam's elaborate work on the *Statistics of Insanity* has been accepted, both at home and abroad, as the standard of appeal in all such inquiries. I shall to-day content myself with directing your attention to the manner in which every landmark laid down by Dr. Thurnam, and every qualifying circumstance which he showed us influenced—irrespective of place or treatment—our statistical results have been set aside, in the forlorn hope that the site and structure of Bethlehem, condemned by this Association, by the Commissioners in Lunacy, by the House of Lords and the Government, and by the medical and general Press, may, on the evidence of figures perverted to this purpose, be shown at last to be nevertheless 'healthy, and possessed of very great natural advantages.'

And well, indeed, might it be deemed so, did Dr. Helps's statistics tell a true story. A mortality, in recent curable cases of insanity, eight and a half per cent. lower than in the asylums of the home counties, *i. e.* a saving of life of 85 in the 1000 might well be thought an answer to the cavils of all the detractors of Bethlehem.

In the British army\* the mortality in England is 9 in the 1000; on the deadly station of the Gold Coast it rises to 46 in the 1000, being a saving of life in favour of service in England of 37 in the 1000. This vast difference is, however, cast into the shade by Dr. Helps' figures. According to his conclusions the mortality in the early stages of insanity at Bethlehem is 50 in the 1000 as against 135 in the 1000 in the asylums of the Home Counties. Thus, deadly as the service on the Gold Coast is deemed, yet deadlier in their influences on the recently insane, in the ratio of 37 to 85, stand the asylums of the home counties, as in contrast with

\* Aitkin's 'Science and Practice of Medicine,' vol. ii, p. 1046.

'the healthy situation and very great natural advantages of Bethlehem.'

I pass to my remarks on these comparative Statistics.

I. *Of the comparative proportion of cures in cases of recent insanity in Bethlehem Hospital and in the English County Asylums.*

In the table before us an attempt is made to separate the admissions in the county asylums during the year 1860 into two classes, viz., the paralysed, idiotic, epileptic, insane twelve months, discharged uncured from other asylums, *i. e.* all those inadmissible at Bethlehem; and, secondly, those admissible at Bethlehem. It is evident that a source of fallacy, as against the county asylums, is at once introduced by this arbitrary standard. It would have been difficult in 1860 to say, with any certainty, how curable a case might have not have been rejected at Bethlehem, and there is, consequently, a marked difference in this table in the proportion these admissible patients bear to the total admissions of the year in the different county asylums. Thus, at Brentwood the proportion of admissible patients to the total admissions is given as 62 per cent., at the Stafford asylum it is 71 per cent., at Rainhill 78 per cent., and at the Durham asylum 62 per cent.; while at Haywards Heath it falls to 50 per cent., at the Cambridge asylum to 49 per cent., at the Dorset asylum to 46 per cent., and at the Hull Borough to 42 per cent.

The fallacies involved in this varying standard are overlooked in the conclusions drawn by Dr. Helps from the table before us.

Farther, no notice is taken of the several circumstances in the character of the cases admitted which modify, irrespective of place or treatment, our statistical results.

"There can, indeed, be no doubt," writes Dr. Thurnam, "that the considerable discrepancy which is so often to be observed in the aggregate results of treatment in different asylums as frequently, or perhaps still more often, depends upon a difference in the previous circumstances and character of the cases admitted, than upon any difference there may be in the various influences and methods of treatment to which they have been subjected in the institutions themselves; and thus, in order to any fair comparison of the recoveries and mortality, we require considerable information as to these several particulars. *This is more especially the case when any judgment as to the management of the institutions brought before us is to be founded upon such comparison.*"

Of the several important circumstances in the character of the cases admitted, which, according to Dr. Thurnam, materially influence, irrespective of 'very great natural advantages of situation,' the results of treatment, I shall here confine myself to the question

of age—a question entirely overlooked, and of which no mention occurs in this table. Yet, in a comparison like that attempted by the resident physician of Bethlehem, the element of age is most important. Every medical Superintendent will bear me out in the statement that a large proportion of our so-called recent cases in county asylums are cases of mania or melancholia occurring in feeble, old people, who have previously passed many years in the union houses, and are too often sent to the county asylum only to die. Yet such cases must be termed, according to this table, "admissible patients," while assuredly they are never admitted into Bethlehem, and their presence in the county asylums tends necessarily to lessen the rate of cures and to increase the rate of mortality on the year's admissions, the standard of comparison here selected by Dr. Helps. On this point let me quote Dr. Hood, a great authority on the statistics of insanity:—

"According to the experience of Bethlehem," he says, "the recoveries under 25 amount to three fifths of the admissions, and to about one half between 30 and 65, if we deduct certain inconsiderable fluctuations. After 65, as might be expected, the recoveries are greatly diminished, being about one seventh."

I might similarly, did time permit, illustrate my position by the influence which diet exerts in the cure of mental disease, and show how the better and more expensive diet of Bethlehem influences, irrespective of healthy site and very great natural advantages, the comparative statistical results of Bethlehem.

I pass, however, from these manifest objections to the statistical comparison here attempted to a consideration of the per-cent-age of cures thereby obtained.

These calculations place the recoveries in the first year of residence, as calculated on the admissions, at 52 per cent. at Bethlehem, and at an average of 39 per cent. in the English county asylums, thus giving Bethlehem an advantage of 13 per cent. in its cures. A more detailed examination of the table, however, places this apparent advantage in a less flattering light, and entitles me to question if the treatment pursued at Bethlehem has, after all, proved so eminently successful, as Dr. Helps here asserts. Thus I find that the following asylums are shown by this table to have attained a higher per-cent-age of cures than Bethlehem:—

|                                | PER CENT. | PER CENT. |                           |
|--------------------------------|-----------|-----------|---------------------------|
| The Dorset County Asylum .     | 60        | being .   | 8 in excess of Bethlehem. |
| The Durham County Asylum .     | 56        | "         | 4 "                       |
| The Somerset County Asylum .   | 56        | "         | 4 "                       |
| The Stafford County Asylum .   | 56        | "         | 4 "                       |
| The Hull Boro' Asylum .        | 57        | "         | 5 "                       |
| The Lincoln Lunatic Hospital . | 64        | "         | 12 "                      |
| The Norwich Bethel .           | 55        | "         | 3 "                       |
| The York Lunatic Hospital .    | 73        | "         | 21 "                      |
| The York Retreat .             | 71        | "         | 19 "                      |
| The Perth Royal Asylum .       | 55        | "         | 3 "                       |

There does not appear to me to be much room for this self-congratulation by the resident physician of Bethlehem on his rate of cures.

## II. *Of the comparative death-rate in cases of recent insanity of Bethlehem Hospital, and of the English County Asylums.*

The death-rate in England and Wales being 22 to the 1000 living (mean population), sanitary reformers regard it as a great triumph when they point to districts in which the death-rate is reduced to 15 in the 1000, and they rightly mark it as a blot on civilisation when this rate reaches 30 in the 1000. Now, in the table under consideration the mortality ranges per cent. from nothing at the York Retreat up to 28 per cent. at the Hull Asylum, or, to bring it into comparison with the death-rate of the population, it is here represented, that, while in the 1000 curable cases admitted none die during the year of admission at the York Retreat, and proportionately 40 die at the Dorset Asylum and 50 at Bethlehem, as many as 280 die at Hull, 140 at Haywards Heath, 90 at Brentwood, 260 in the Hants, and 150 at Northampton. Thus, while the Registrar-General grounds his highest laudations and his gravest censures on a death-rate varying between 15 and 30 in the 1000, the resident physician of Bethlehem claims his meed of praise on a comparative death-rate varying from 0 and 50 up through 90 and 140 to 280 in the 1000. With some sense of this incongruity in his results, Dr. Helps strikes an average, and is content to claim for Bethlehem a pre-eminence over the county asylums because the death-rate at Bethlehem is 70 in the 1000 lower than their average. An excess in the death-rate of 15 in the 1000 scares the Registrar-General; yet it is here calmly stated as a fact that while the death-rate in 1860, in recent curable cases of insanity, was 135 in the 1000 in the asylums of the Home Counties, it fell to 50 in the 1000 at Bethlehem.

How is it possible, it may well be asked, to arrive at such a wonderful conclusion as that 'the healthy situation' and 'very great natural advantages of Bethlehem' should result in so incredible a saving of life in cases of recent mania as 80 in the 1000? It has been done, as I have said before, simply by ignoring every principle of statistical science, as it relates to the comparative death-rate of any given population or disease, when dealing with these figures so diligently collected by Mr. Ellis. "The uncertain and erroneous views," writes Dr. Thurnam, "which have hitherto so generally prevailed as to the comparative mortality of the insane are in a great measure to be attributed to the calculations having generally been made according to an erroneous method. . . . The method of calculating the proportion of deaths upon the admissions is that which has hitherto been generally followed in the reports of asylums, as

well as by Drs. Burrows and Esquirol, and other authors, well known by their writings on insanity. *In this way most erroneous inferences as to the comparative success of different institutions as respects their mortality, have been put into circulation.*"

I submit that the comparative death rate of Bethlehem and of the county asylums in recent cases of insanity, 50 in the 1000 as against 130 in the 1000, is such an erroneous inference thus obtained.

In 1862 Dr. Hood published a well-digested *Report of the Statistics of Bethlehem Hospital from 1846-1860*. Dr. Hood had studied his subject carefully, and he did not fall into the errors and exaggerations shown in the table under consideration. He takes the comparative mortality of Bethlehem and of the Retreat, and shows how, in an experience of 100 years, the mean annual mortality of Bethlehem stands at 7·5 per cent. as against 4·7 per cent. at the Retreat during 50 years, adding, however, most fairly, that during the 5 years, 1856-60, the death rate at Bethlehem had fallen 2 per cent. to 5·1, as, I may add, might have been anticipated from the improved treatment introduced by Dr. Hood during the period. Dr. Hood also placed the death-rate in the county asylums at 10 per cent. His conclusions may thus be stated:—At the York Retreat 47 in the 1000 die annually; at Bethlehem 51 in the 1000, where formerly 75 in the 1000 died; in the county asylums 100 in the 1000. And here it must be remembered that Dr. Hood, in comparing thus the mortality of Bethlehem and of the English county asylums, fully acknowledges the causes of this different rate, and chiefly the presence in the county asylums of cases of general paralysis and senile mania, which so materially swell the death-rate while extending the usefulness of the latter.

Dr. Helps, on the other hand, with an appearance of fairness, confines himself to the comparison of the death-rate in cases of recent insanity only, and arrives, through a faulty method of calculation, at the result that this mortality at Bethlehem stands in the ratio of 50 to 130 in the county asylums; and he directs 'the attention of the governors, and of all those interested in obtaining accurate information on the important question of the cure of the insane,' to these results, in evidence of the 'eminently successful treatment pursued at Bethlehem,' of its 'healthy situation,' and its 'very great natural advantages.'

I would, in conclusion, ask leave briefly to show what the real comparative statistics of Bethlehem Hospital are. The necessary figures are calculated from returns in the 'Eighteenth Report of the Commissioners in Lunacy to the Lord Chancellor.' The comparative results for a period of five years are given in the following table:—

*Table showing the proportion of recoveries per cent. of the admissions, and of the mean annual mortality per cent. of those resident in Bethlehem Hospital and in five other Lunatic Hospitals, and in five of the English County Asylums.*

| Five years, 1859—63.               | Proportion of<br>Recoveries per cent.<br>of admissions. | Mean annual<br>Mortality per cent.<br>of those resident. |
|------------------------------------|---|--|
| <b>1. Lunatic Hospitals.</b>       |   |  |
| Bethlehem Hospital . . . . .       | <b>47·4</b>   | 5·7  |
| The Retreat, York . . . . .        | 39·2  | 5·2  |
| York Lunatic Hospital . . . . .    | 36·9  | 6·6  |
| Coton Hill, Stafford . . . . .     | 42·1  | 5·2  |
| Warneford Asylum, Oxford . . . . . | 28·5  | 2·1  |
| Bethel Hospital, Norwich . . . . . | 53·8  | 5·7  |
| <b>2. County Asylums.*</b>         |   |  |
| Essex County Asylum . . . . .      | 46·9  | 10·2   |
| Wilts County Asylum . . . . .      | 43·9  | 12·6   |
| Somerset County Asylum . . . . .   | 50·5  | 10·8   |
| Stafford County Asylum . . . . .   | 52·5  | 14·7   |
| Suffolk County Asylum . . . . .    | 47·9  | 12·9   |

Again, in 1864, the admissions at Bethlehem were 189, the cures 82, the deaths 17, and the mean population 263. The per-cent-age of cures is thus 43·3, the mean annual mortality 6·4. At the Friends' Retreat the admissions in 1864 were 15, the cures 6, the deaths 6, and the mean population 122. The per-cent-age of cures is thus 40, the mean annual mortality 4·9.

I do not think that Bethlehem has much to boast of in these official figures. Its proportion of cures on the total admissions, despite the careful selection of curable cases only for admission, is exceeded by the Bethel Hospital, Norwich, and by the Somerset, Stafford, and Suffolk county asylums. And turning to the death-rate, the mean annual mortality of Bethlehem, despite its freedom from cases of general paralysis and of senile mania, is shown to be 57 in the 1000, while at the Warneford Asylum, Oxford, it is 21 only, at Coton Hill 52, at the Retreat 52. In 1864 the Bethlehem mortality is 64 in the 1000 as against 49 in the 1000 at the Retreat.

I venture to submit to this meeting that Comparative Statistics enforce the resolution adopted two years ago by this Association, THAT THE SITE OF BETHLEHEM HOSPITAL IS ILL ADAPTED TO THE PRESENT STATE OF PSYCHOLOGICAL AND SANITARY SCIENCE, and negative the statistical conclusions of Dr. Helps as to its 'healthy site' and 'very great natural advantages.'

\* See the report of the Essex Lunatic Asylum for 1864, for a detailed calculation of the per-cent-age of Cures and Mean Annual Mortality in the several county asylums of England.

NOTE.—In the debate which followed the reading of this Paper (see Part IV, ‘Report of the Annual Meeting of the Association’) considerable misunderstanding appeared to be entertained by Drs. Monro and Wood as to my object in writing it. Thus, Dr. Monro, after stating the little faith he placed in any statistics, said that if he had to choose between figures, he preferred Dr. Helps’ to mine, and he certainly more than implied that I was actuated by a feeling of personal annoyance in what he viewed as my present unsuccessful attempt to disparage Dr. Helps’ statistical praises of ‘the eminently successful treatment pursued at Bethlehem Hospital.’ He also complained of a supposed effort on my part to farther disparage Dr. Helps by comparing his treatment and its results with the statistics of Bethlehem Hospital formerly published by Dr. Hood; and referring to the hereditary ties which bound him to Bethlehem, he dwelt on the pain which the censures, of late so indiscriminately heaped on that time-honoured site and structure, occasioned him.

This is not, of course, the place to defend statistics in their application to Medical Science against Dr. Monro’s misgivings. Besides, he afterwards modified and explained away these doubts. Then, as to his preference of Dr. Helps’ statistics of Bethlehem to mine, any reader of my Paper must admit that I in no way give any statistics of Bethlehem, save such as are recorded in the official report of the Commissioners in Lunacy. If Dr. Monro prefers Dr. Helps’ great conclusion from Mr. Ellis’ figures, that the mortality in recent cases of insanity at Bethlehem Hospital stands to that of the asylums of the Home Counties in similar cases in the ratio of 50 to 135 in the 1000, to the more sober truth revealed by the statistics of the Commissioners in Lunacy, I can only regret that his hereditary zeal for the honour of Bethlehem should so dim his judgment. I certainly claimed Dr. Hood as a witness to the inaccuracy of Dr. Helps’ figures. Nothing can be fairer or more imbued with the spirit of truth (which should be the end sought in all scientific inquiry) than Dr. Hood’s comments on the statistics of Bethlehem Hospital. It was impossible, in a protest against the false conclusions attempted to be drawn by Dr. Helps of the comparative success of Bethlehem Hospital and of the asylums of the Home Counties, not to remember the just and wise method in which the same figures had been dealt with by Dr. Hood.

Next, it is true that thirteen years ago, in 1852, I was a candidate for Bethlehem, and though possessed of no city influence whatever, nor of relations connected with the Corporation, the Bethlehem Committee did me the high honour of placing me, at twenty-seven years of age, second on the list of candidates for the office of Resident Physician, which they then most wisely substituted for the services of their hereditary Visiting Physician. When, subsequently, by Dr. Hood’s well-merited promotion, the office was vacant in 1862, I should

probably, led by the ambition of making Bethlehem a great school of Mental Pathology,\* again have offered myself to the notice of those who had so honoured my previous application, had I not been authoritatively informed that Dr. Helps' ten years' service, as resident medical officer, was considered by the Committee as a claim against all possible candidates, which, indeed, the result of the election proved it, in the opinion of the governors of Bethlehem, to be. But why these facts in my private history should be brought before the meeting as arguments against my criticisms on the foolish and obstinate refusal of the governors of Bethlehem to remove the site of their hospital and to build a new Bethlehem in accord with the present state of psychological and sanitary science, I am at a loss to conceive; save that no other answer to them may be found. Still less can I see what other connection they have with my present protest against Dr. Helps' misuse of statistics in the table in question. Yet, surely, such matters are best discussed on their own merits.

In the subsequent discussion Dr. Wood and Baron Mundy, in pointing out the fallacies which result from a varying standard in statistics, ably enforced the truth which I here endeavour to defend, viz., that mere figures, without the varied qualifying circumstances influencing the results of treatment, are more generally delusive than not. Moreover, that they are specially so in the table in question I venture to think my Paper proves. Dr. Wood also truly urged that no deduction as to the unhealthiness of Bethlehem could be drawn from a consideration of the mortality irrespective of the history of the fatal cases, showing how many of these admissions must die from the mental disease irrespective of the site of Bethlehem. It will be seen that I endeavour to support similar views. My Paper is a protest against Dr. Helps' comparison of the cures and of the death-rate of Bethlehem and of the asylums of the Home Counties, as having been obtained by an ignoring of those elementary rules in comparative statistics on which Dr. Wood thus dwelt. I could wish no abler advocate of these opinions.

I would only add, that in my endeavour to show how Statistics negative Dr. Helps' conclusions as to the 'healthy site' and 'very great natural advantages of Bethlehem' I did not, and am in no way disposed to, support my former criticisms on the unfitness of the present site and structure of Bethlehem Hospital, on any use I might be able to put their statistical results to. The question admits of a much

\* The Senate of the University of London, in their wish to acquire clinical instruction in Mental Disease for their degree in medicine, are at this time placed in the difficulty of not knowing where this clinical teaching is to be had! It weakly languishes at St. Luke's, and, in direct negation of the Rules for the guidance of the Resident Physician, is a dead letter at Bethlehem; while in Edinburgh, in Vienna, in Paris, such teaching is amply and successfully supplied.

broader treatment, as will be seen by a reference to the discussion at our annual meeting in 1863 on my Resolution relative to the site of Bethlehem. Thus, to quote the speech of my revered friend Dr. Conolly in seconding the same :—

DR. CONOLLY.—*It appears to me that Dr. Robertson's object is only that the Association should in some way or other be led to express an opinion upon a very important subject—a subject of very great interest to the public. It is not a matter between the governors of Bethlehem and their patients, but a matter that concerns the public administration of a charity of very great importance. I think we might, as a large association of gentlemen connected entirely with the subject of insanity, venture to express an opinion, at all events; not by any means to dictate the course to be pursued; and that such opinion might be so expressed to the Commissioners as to have some influence. The usefulness of Bethlehem ought certainly to be very much wider than it is, and its influence upon medical education ought, I may say, to be created, for it does not at present exist. There are benefits of the most important character, not only to the interests of medical men connected with insanity, but to the public at large, that should at this moment be pressed upon the attention of the governors in the strongest manner; for if the opportunity now goes by, the state of Bethlehem must continue what it is for another hundred years. I appeal to any gentlemen who receive, as I frequently do, foreign visitors, who come to visit our asylums, and I ask whether such visitors do not go back with all their prejudices confirmed, by seeing that we, in our writings, express certain views and opinions as to the treatment of insane, and that our large public institutions in or near London, to which they are especially and almost exclusively directed, do not present to them the model or example which they were led to expect. I offer these remarks without the slightest disrespect to any one connected with those institutions; but I cannot conceive from myself that they require very great alteration and improvement. I believe that the medical men attached to these institutions—I speak particularly of Bethlehem—are quite incapable of carrying out in the present building many improvements that might be suggested by them in accordance with the present state of psychological and of sanitary science, subjects which now deservedly occupy so much public attention. I am, therefore, very anxious that Dr. Robertson's proposition should be carried into effect, and that the members of the Association should not separate without expressing their views on this great impending public question. If the present opportunity is passed over, it will not recur in the lifetime of any one of us. (Applause.)*

Dr. Helps endeavoured to prove, by his comparative Statistics of Bethlehem Hospital and of the English County Asylums in 1860, that this Association erred in the judgment it had thus passed on the site and structure of Bethlehem. His Statistics, as I have shown, are obtained by an erroneous method of calculation as regards the comparative death-rate (which he took on the total admissions instead of on the mean population resident), and by an ignoring of all the circumstances influencing results of treatment in reference to the comparative cures. Nevertheless Dr. Helps' own figures show no excess in cures at Bethlehem over many of the County Asylums, while, when the comparative death-rate is properly calculated, it is found that the mortality at Bethlehem is in excess of similar institutions enjoying less advantages in the selection of their patients.

I cannot think that the reputation of Bethlehem has gained by

these statistical feats of the Resident Physician, and the fallacies of which it has not been, with all deference to Dr. Monro's adverse opinion on my Paper, a difficult task to expose.

HAYWARDS HEATH ;  
July 15th.

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*The Prognosis in Mental Disease.* By W. GRIESINGER, M.D., Professor of Medicine and Psychiatrie in the University of Berlin.

(A translation from the German.)

THE prognosis in mental disease involves two separate questions. In the first place, DOES THE EXISTING DISEASE ENDANGER LIFE? And in the second place, IF LIFE BE CONTINUED, WHETHER, AND TO WHAT EXTENT, MAY RECOVERY FROM THE MENTAL DERANGEMENT BE HOPED FOR?

The reply to the first of these questions often depends more upon the presence of serious disease in other parts, as tuberculosis, heart disease, &c. (which are to be estimated according to established principles), than upon the presence of the cerebral affection. Amongst the purely cerebral affections, the most rapidly fatal are those serious degenerations of the brain, connected with the symptoms of general paralysis, because they, as a rule, prove fatal in from one to three years, and very often in even a much shorter period. Of unfavorable prognosis are likewise extensive and intense hyperæmias of the brain which occasionally, at a certain stage, lay the foundation of mania, but more frequently come on paroxysmally during the course of that disease; they may rapidly advance to acute softening of the cortical substance, or may prove almost immediately fatal by causing serous effusions, extravasation of blood, &c. Cœdema of the brain, especially if it comes on acutely, might be a cause of death; and the refusal of food, seen in certain cases of melancholia, if long continued, becomes one of the events dangerous to life. As a rule, there is a much greater tendency to death within the earlier periods, during the acute stages of melancholia and mania, than in those conditions of chronic irritation, or more gradual, but incurable, changes of structure in the brain, which give rise to chronic forms, to monomania, to melancholia with the character of mental weakness, or to imbecility. These thoroughly chronic forms allow of not only a long duration of life, but very frequently there is noticed at an early stage of the disease a remark-

able improvement in the state of health of the patients, who gain flesh and weight. Every asylum contains amongst its old inmates many such examples.\*

The decision on the second question in our prognosis, viz., *the curability of the insanity when life is not endangered*, is to be determined by the consideration of a greater number of special circumstances, and requires a much more intimate knowledge of mental disease. Here, also, the statistics of the various institutions for the insane afford us much valuable information, inasmuch as they exhibit a series of the results of experience, agreeing with each other in their various particulars, as, for example, the incurability of secondary dementia, the influence of the duration of the disease upon the prognosis, &c. It must, however, be borne in mind that many statistics regarding curability are not to be implicitly trusted, the word *cured* not being universally employed in precisely the same sense, and no statistics can bring to view all the complicated circumstances which in concrete cases determine the decision as to the curability of the malady.

A primary consideration, and, indeed, the most important as regards the question of curability, is the *form of the insanity, and the period of the disease*. Thus, we consider as quite incurable every form of secondary dementia, with which, however, we must not confound melancholia with stupor, nor the temporary profound suspension of the faculties frequently observed after mania. Chronic mania is scarcely more susceptible of radical cure; occasionally, however, it admits of considerable improvement, because the falseness or errors of judgment may extend over a large circle of ideas,

\* A comparison of the death-rate in asylums for the insane, to be of any value, requires a minute inquiry into the various causes of their difference.

The mortality is always greater in those establishments destined specially for recent cases than in asylums proper, for the majority of deaths amongst the insane occur within the first twelve to eighteen months of the malady. This is explained by the fact that the recent and acute cerebral affection may be merely a complication of serious physical disease; also by the frequent occurrence of mania or of general paralysis in the early stages. The comparative frequency of this latter complication tends, more than any other circumstance, to modify the statistics in different countries and in various institutions. It is this, also, which causes in general a greater (earlier) mortality amongst males than females. In Bethlehem, where no case of more than a year's standing and no epileptic or paralytic is admitted, and where no case is detained longer than a year, the mortality was 6 to 9 per cent. St. Yon, a general asylum, over 7 per cent. Wenenthal, almost solely devoted to curable cases, in the twenty years from 1834 to 1854, 11 to 12 per cent. Siegburg, in the four years from 1846 to 1950, 10 to 11 per cent. Sachsenburg, in the ten years from 1840 to 1849, 16 to 17 per cent. Hanwell, 12 per cent. Lenbus (for curable cases), in twenty-four years, 16 per cent. (Martini). The English poorhouses, 27 per cent. The Antignalle, in Lyons, 30 per cent. It would be not only irksome but impracticable to consider here the various circumstances which cause the remarkable differences presented by these superficial quotations. Hitchman (1850) came to the conclusion (from the statistics of Hanwell) that the normal ratio of mortality is tripled in mental disease. (*This note is far from accurate.—C. L. R.*)

or may, on the contrary, be confined to a few hallucinations. In the last case the fixity of the ideas depends upon total perversion of the patient's individuality, which renders it impossible for him to throw off the idea that continually follows him, to distinguish his former *self* amid the confusion of his whole manner of contemplation—in a word, to become himself again. Any real improvement, therefore, which can only be shown in the concealing of his delusions, in his becoming accustomed to orderly habits and deportment, and to an, at all events, mechanical sense of duty, can only be obtained after long-continued, and in many cases most energetic, treatment. Even then, however, the result is very uncertain.

Amongst the primary forms of melancholia and mania, my observations (which correspond exactly with those of Flemming) go to prove that it is the former, in its really primary stage, which is the more easy of cure. If, on the other hand, many other medical psychologists (Jessen, Ideler, Falret, Ferrus, Haslam, Rush, &c.) declare that mania, especially acute mania, is, generally speaking, the most curable form of insanity; it may be that they come to that conclusion from the results of practice in asylums into which simple cases of melancholia seldom find their way, but more frequently difficult cases, and those of long standing, and which therefore, of course, come after mania in the order of curability. For, very naturally, in even the lighter cases of mania, the aid of the asylum is sought, owing to the condition of exaltation; while many cases of moderate melancholia are, when taken in time, successfully treated at home. As for chronic and protracted cases of melancholia and mania, however, it is difficult to distinguish any difference in the prognosis; indeed, more frequently a rapid interchange of both takes place, forming a continual vacillation between exaltation and depression.

Amongst the primary forms a short stage of melancholia is more favorable than a long one; a state of vague, objectless emotion, be it sad or cheerful, and vague general delirium, is always more favorable than the appearance and continuance of fixed ideas. It is on this account that monomania with excitement is far less susceptible of cure than acute mania. In melancholia, too, the appearance of hallucinations is decidedly unfavorable; those especially which refer the malady to external agencies, to other persons, to witchcraft, &c., are remarkably persistent, and introduce at a later period a condition of dementia; when, on the other hand, the patient attributes the cause of his condition to something within himself, for example, to imaginary vomiting, he is much sooner disposed to quit his delusions (Zeller).

In thus forming a prognosis upon the form of the disease, the most important consideration is always the determining whether the

mental disease is still active and in progress, or whether it is only the remains of an exhausted and extinct pathological process. Seeing that mania represents the acme of all stages and of all forms, it may be given, as a practical rule, that if a period of mania be succeeded by a complete and prolonged calm, but without really favorable indications, the patient is in the greatest danger of incurability. The prognosis, moreover, is especially difficult at that stage when the primary forms degenerate into chronic mania and dementia, which degeneration often takes place after years of alternating amelioration and relapse. On the one hand, the cessation of all disturbances of the physical state, especially with increasing *embonpoint*, and, on the other, all permanent anomalies of motion and of sensibility (convulsions, changes in the state of the pupils, loss of smell, of taste, eating of mud, fixing the eyes upon the sun, obstinate wandering, muscular pains, &c.) are to be viewed as decidedly unfavorable symptoms; and such signs as the following—the absence of a return to normal tastes, to healthy inclination for employment, the constant leaning towards unbounded whimsical exaggeration, unaccompanied by exaltation of the sentiments, increased incoherence of ideas, stupidity of countenance, &c.—indicate, from the psychical side, continuance or further progress of the disease.

The duration of the disease is, as all experience has shown, of greater importance as regards the prognosis in this than in any other malady. In reference to this point, various statistics may present slightly different results, but the principle admits of no exception. Thus, in Winnenthal, the number discharged recovered of those admitted within the first six months of the disease amounted to 68 per cent.; after two years' illness, 18 per cent.; and after a duration of four and a half years, only 11 per cent. In the Retreat, of admissions within the first three months, 80 per cent.; from three to twelve months, 46 per cent. Jessen's recoveries in recent cases (*i. e.* those of not more than a year's standing before admission) amounted to 66 per cent.; in cases of longer standing, 12 per cent. In Leubus, of admissions within the first half year, 64·16 per cent.; within the first year, 34·26; after a year's illness, 20 per cent. In cases which come under proper treatment within the earlier months of the disease, the proportion of recoveries may be estimated at 70 per cent. (Ellinger); and Esquirol estimates that, after three years' observation of the disease, only one in thirty of the cases recover. The hope, therefore, of complete recovery becomes dim if no appreciable step towards improvement takes place within a year. Examples, however, are not unfrequent of recoveries after six, ten, or even twenty years' illness, as may be occasionally observed in institutions devoted specially to chronic cases. This occurs more frequently amongst females, in whom a favorable influence is sometimes exerted at the climacteric period.

Regarding the prognostic signs to be drawn from the course of the disease, and the manner in which the symptoms are grouped, periodic attacks, with the lucid intervals longer in duration than the paroxysms, are decidedly unfavorable. It generally happens that with patients who fall into insanity, and at the earlier period of the disease have an attack once a year, or once in three years, or even once in seven years, the attacks as time advances become longer and more serious, the lucid intervals shorter, and with each new attack the prognosis becomes more unpropitious. In continued cases a gradual slow development of the disease generally (but not always) denotes that it will be slow in its course and difficult of cure, while a sudden commencement is, as a rule, favorable. On the other hand, however, recoveries which take place gradually and slowly are generally more permanent than the rapid cures, which are seldom lasting, especially if the malady has been of long standing. Irregular alternations and attacks of violence are always more favorable than a prolonged continuance of the same symptoms—for instance, a constant state of maniacal excitement, a permanent, and at the same time moderate excitement, constant voraciousness, prolonged refusal of food, &c. Nymphomania, with its various modifications, is, in young persons, of rather favorable prognosis; but when it appears later in life, at the climacteric period, it rarely admits of cure. The various conditions arising from sexual super-excitation in men of advanced years are equally grave in a prognostic point of view; they generally proceed to dementia. The return of a period of depression in mania, as, for example, much weeping, is a favorable symptom, inasmuch as a period of melancholy frequently precedes recovery, or at least a sadness of spirit is followed by a lucid interval; so also in every case the return of decency of conduct, of former desires and favorite pursuits (work, music, &c.), of memory, of desire to see relatives, &c., are to be regarded in a favorable light. Numerous hallucinations coexistent with a state of calm are unfavorable. A perfect state of physical health—regarding which we can only speak after a minute and thorough examination of all the organs—in long-standing mental derangement, is, and very properly too, regarded as an inauspicious circumstance. On the other hand, the return of former bodily ailments which had disappeared during the disease—as toothache, headache, œdema, hæmorrhage, &c.—is occasionally, though by no means frequently, observed to coexist with decided improvement in the mental state, sometimes, indeed, with rapid recovery. All remissions, and all intermissions and lucid intervals becoming gradually longer in duration, are naturally favorable. But the best prognostic sign of all is a knowledge on the part of the patient of his mental disorder, the feeling of illness, and a reaction of the former self against the state now recognised as a morbid one; nevertheless, as Jacobi justly observes, “The power to carry through

this reaction may fail, and the temporary glimmer of self-consciousness be again extinguished."

The causes, exciting or predisposing, of the mental disease have also a prognostic value. It cannot be disputed that insanity at an early age is more frequently cured than when it occurs in advanced years. Still, cases of recent insanity, occurring in individuals of fifty or sixty years of age, frequently turn out favorably, and senile dementia is the only form which presents absolutely no hope of recovery. The generally admitted fact, that insanity is more easy of cure when it occurs in women, is doubtless chiefly owing to the less frequent occurrence in them of general paralysis. Jessen, and his observations have been confirmed by several others, obtains better results, especially in cases of long standing, amongst females. It would therefore appear that in the opposite sex a state of incurability sets in, on an average, at an earlier date. With regard to cases of hereditary insanity, there is a preconceived and all but universal opinion that the prognosis is absolutely hopeless, hence the frequent neglect of the necessary therapeutic measures. But the numbers of such cases that have been successfully treated are sufficient to establish the fact, that hereditary insanity in itself does not constitute a case incurable; still, the chances of recovery are but slight, and even when it has taken place there is great danger of relapse. As to whether patients from the upper ranks of society, of good education (as has been asserted), present greater chances of cure than those from the lower classes—whether recoveries are of rare occurrence amongst Jews, &c.—are subjects upon which I must confess my inability to give a definite opinion. The natural disposition, acquired peculiarities of character, the degree of strength of mind, the ease or difficulty with which the patient yields to the malady or to the curative influences, are points of the greatest value in prognosis. Diseases which have been gradual in their development, occurring in persons who have been remarkable from youth upwards for their excessive capriciousness, their originality of taste, and eccentricity of character, are serious in every point of view. Equally unfavorable are cases originating after long and painful emotion, years of vexation, prolonged suspense between hope and doubt, ending in disappointment. So also of intense emotion and its subsequent depression. These deep wounds do not heal without injury to the cerebral structure; they are often followed by complete derangement of the nervous system, and in such cases the chances of recovery are far less than in those resulting from a sudden mental shock, a fright, &c.

The primary idiopathic affections of the brain are, generally speaking, much more serious than the secondary and sympathetic. Mental diseases following upon injury to the head, acute meningitis, sanguineous apoplexy, and long-standing epilepsy, especially the two

latter, are almost absolutely incurable (still, there are exceptions); and the same may be said of those which have made their appearance after typhus fever, and become chronic. On the other hand, anaemia, acute congestion of the brain, indigestion, menstrual and many other derangements of the sexual organs, are amongst the physical states which contribute to the development of mental disease of more favorable prognosis. In insanity resulting from inveterate drunkenness the prognosis is most unfavorable; it early assumes the character of mental weakness. Where it originates from more moderate intemperance the case may be considered curable, but there is an extraordinary tendency to relapse. Onanists and those exhausted by sexual excesses are not to be considered incurable so long as the cause can be removed, the general health improved, and any existing local disease successfully treated. Recovery, on the other hand, is impossible where monomania has set in, and particularly where the patient has hallucinations referring to personal intimacy of the most debased kind with the supernatural, together with a tendency to masturbation. Hysterical insanity, acute in its outbreak, and with violent agitation, is of better prognosis than when it is passive, characterised by depression, and slow in its course. Of all the forms of insanity, puerperal mania is that in which the prognosis is most favorable. In asylum practice this form stands high in the ratio of curability, although the majority of such cases do not enter these institutions, but are successfully treated at home.

The external circumstances and relations of life of the patient greatly influence the prognosis. Where effective treatment is limited by poverty or other untoward circumstances, where the obstinacy or prejudice of relatives prevents timely interference, or where removal from those scenes of life is rendered impossible in the midst of which the mental malady arose and from whence it constantly derives new vigour, no false illusions need be built regarding the possibility of cure; nothing can here be expected from nature, whose efforts are thus rendered ineffectual.

A consideration of the chances of recovery in insanity affords, upon the whole, very gratifying results. From the statistics of institutions for the insane it appears that recent mental disease allows of a far better prognosis than most other chronic affections of the brain. If we understand, however, the word "recovered" to signify, as it ought, the total disappearance of the mental disease, the complete return of the former capacity of intellect, of the whole earlier force of character, it must, of course, be but seldom that such a result can be expected. Cases are far more numerous where, indeed, the leading symptoms of the insanity disappear, but the individual retains a slight feebleness of intellect, continues irritable in temper, has nervous pains, or is possessed of certain eccentricities,

which, however, permit him to take part in the simpler avocations of life, and, it may be, to return to his former pursuits. Hence a distinction ought to be made in successfully treated cases between *recovered* and *improved*, as has long been the practice in many well-regulated institutions, such as Winnenthal.\*

The mere disappearance of the more striking symptoms, the cessation of the fury and the delirium, cannot be regarded as certain signs of complete return to mental health. The patient may become quiet to all appearance, and learn to conceal many false notions, which are, nevertheless, inwardly cherished by him, and this may even coincide with a striking improvement in the state of general health. The most important symptoms of really returning sanity are rather the distinct appreciation of the mental disease by the patient, the discernment of the former abnormal state, the parting with all its accompanying delusions, and the impartial estimation of the present position from every point of view. With these must be associated a return to former tastes and to normal habits, of the instinct for vital activity, of interest in the former affairs of life, of that affection towards family and friends so often changed to hatred during the disease. Just as the insanity commenced with perverted dispositions and emotional states, so it is this phase of psychical life that is specially to be looked to in its disappearance. When, on the contrary, the intellect appears unimpaired, but where abnormal aversions still exist towards certain individuals, or a vague state of sullen anger and passion, or perhaps merely a state of psychical exaltation, is retained, which renders the patient very irritable, so long as the patient cannot bear any reference to his former malady and solicitously shuns everything that may recal

\* It is evident that by such *improvement* is to be understood, not only a state of outward calm, but an essential alteration, comprehending the complete arrest of the further progress of the disease. It would, for example, be wholly inadmissible to declare that a maniac whose disease had gradually verged into dementia, and who was now, as a consequence, quiet and inoffensive, and could even be kept in private circumstances, was on that account improved. Such a case has, on the contrary, become in reality aggravated, and can only be dismissed from the asylum as no longer curable.

It may be here permitted to give a few quotations from the statistics of the asylums of Germany. Winnenthal had in twenty years (1834 to 1854) 1424 admissions (888 males, 536 females); whereof there were 445 recoveries (260 males, 185 females), equal to 31 per cent. Siegburg, from 1st October, 1846, to 31st December, 1850, 872 patients, 277 recoveries, equal to 31 per cent. Sachsenburg, in ten years (1840 to 1849), 695 admissions, with 213 recoveries, equal to 30 to 31 per cent. From Sonnenstein, during the five years 1846 to 1851, there were dismissed recovered 33 per cent. of those admitted. These results correspond in a remarkable manner with one another, and when Flemming says ('Ztschr. f. Psych.', xv, 1858, p. 8), "It is at the present time satisfactorily demonstrated that, with respect to mental diseases, no statistics exist wherein conclusions may be founded regarding the curability of these diseases or the efficacy of the remedial means employed," I quite agree with him on the latter point, but I cannot at all endorse his statement regarding the *curability* of insanity.

it, where, in a word, anything strange is still observable in his feelings, demeanour, speech, physiognomy, or glance, we cannot say that full recovery has taken place. The foundation of recovery is rather a perfect quietness of mind; the individual who is radically cured speaks freely of his malady to those around, and especially to the physician, as of something which has now become quite foreign to him. He expresses almost always thankfulness and confidence, but never boisterous joy at his recovery, and leaves the date of his dismissal from the asylum, without trying to hasten it, entirely to the discretion of the physician.

Those recoveries which take place gradually, with steadily progressing consciousness of the internal malady, are, generally speaking, more lasting than rapid and sudden improvements, even though they may appear quite as complete. On the one hand, there may exist, as regards the mental state, the most favorable signs of complete recovery, while, on the other hand, physical diseases, such as tuberculosis, diseases of the genital organs, &c., which had evidently exerted an influence upon the developement of the mental disease, remain unhealed. In such cases the verdict of full recovery from the insanity need not be delayed till the restoration of bodily health, but at the same time the great danger of new and repeated mental disease must be kept in view. In all these cases a certain duration of the feeling of wellbeing is required to distinguish permanent recovery from mere lucid interval; just as we would not pronounce a case of epilepsy to be *cured* after months even of freedom from the attacks, but first wait for a longer period the full confirmation of our favorable opinion.\*

The proportion of the permanent recoveries must be estimated by the number of relapses. Jacobi estimates that of 100 recoveries about 25 are re-admitted. Parchappe gives 164 relapses in 498 recoveries. Farr, for the English county asylums, gives 1200 relapses in 5486 recoveries; more than one fourth. Julius, for the York Retreat, makes the official statement of 31 relapses to 100 recoveries; he, however, considers the actual proportion to be much higher. Damerow had in Halle 14 per cent. Guislain estimates 19 per cent. as the proportion in asylum practice; this

\* Some observers (Esquirol) were disposed to consider only those cases of recovery as sufficiently certain which were accompanied by a well-marked *crisis*; others (Jessen, C. G. Neumann, and ourselves) have, upon the whole, very seldom observed such crises. We do not deny that those constitutional changes, which must frequently accompany recovery from such a serious disease, may occasionally be announced by increased quantity or altered quality of the excretions, by the appearance of skin eruptions, &c., and that to a certain extent a favorable interpretation is due to those events when they occur coincidently with mental improvement. These phenomena appear, however, more frequently as results than as causes of the recovery; very often they are wholly accidental occurrences, and the fact of their frequent complete absence would of itself sufficiently refute the opinion of Esquirol.

number is also given for the asylums of Holland (Schröder van der Kolk). But all the cases of relapse do not again enter the asylum to be treated; we must therefore accept a higher number, from 20 to 25 per cent., as the proportion of the once recovered who again become insane.\*

Relapses occur by far most frequently during the first and second years after recovery. This is easily accounted for by the state of exalted irritability which often continues for some time after the disappearance of the disease, and the greater susceptibility to physical ailments which must exist after so serious a malady. Too early dismissal from the asylum is likewise a frequent cause. To the first of these causes is also probably due the fact that relapses are somewhat more frequent in the female sex (Schröder van der Kolk and Parchappe). It should be remembered, too, how rare complete and lasting recoveries are in most chronic diseases, and how difficult it is to remove certain constitutional causes which may frequently have existed from earliest infancy, whose constant action has, as a consequence, a succession of diseases following the same pathological direction. It is not to the powerlessness of our art, nor to a certain predestinated incurability of these forms of disease, that we ascribe relapses in those, who on their dismissal from the asylum return to the most wretched conditions of life, or to the full influence of those health-destroying causes which were to blame for their first attack. In the case of individuals who, on recovery, return to habits of drunkenness, to misery, to over-fatiguing employments, to the causes of violent agitations and emotions, we can almost with certainty predict a relapse; the drunkard especially is each time dismissed from the asylum only with the unsatisfactory prospect of soon seeing him again. Upon the whole, however, the prospects of recovery in insanity are much brighter than is generally supposed by medical men and the public. At all events, we may

\* [Dr. Thurnam's estimate is not so favorable. "Of 244 persons (he writes) attacked with insanity, under all circumstances as to age, sex, and form of disorder, and as to proper care during the early stage of the disorder, 131, or 53·6 per cent., recovered from the first attack, during which the rest died. And on following the 131 through life, it appears that there was only one third of these, viz., 45, or 18·4 per cent., of the whole, whose recovery was permanent. The remainder experienced one or more subsequent attacks, the majority dying in a state of insanity; so that of the whole number rather more than one fourth only, 65 (45 + 20), or 26·6 per cent., were in a state of mental health at the time of death. In round numbers, then, of 10 persons attacked by insanity, 5 recover and 5 die sooner or later during the attack. Of the 5 who recover, not more than 2 remain well during the rest of their lives; the other 3 sustain subsequent attacks, during which at least 2 of them die. But though the picture is thus an unfavorable one, it is very far from justifying the popular prejudice that insanity is virtually an incurable disease. And the view which it presents is much modified by the long intervals which often occur between the attacks, during which intervals of mental health (in many cases of from ten to twenty years' duration) the individual has lived in all the enjoyments of social life."—C. L. R.]

confidently assert that the prognosis in recent acute insanity is very much more favorable than in most other diseases of the brain, especially than in the various forms of epilepsy.

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*Insane Patients in London Workhouses.* By FRANCIS EDMUND ANSTIE, M.D. Senior Assistant-Physician to the Westminster Hospital.

THE present seems to be a favorable moment for directing the attention of the profession to the condition of those insane paupers who are confined in workhouses. A general disposition to criticise the management of these establishments exists in the public mind, and the profession has given unequivocal evidence that it shares in this feeling and is determined to carry out the inquiry thoroughly. It may be safely affirmed that, if this is to be done, there is no part of the subject which demands earlier attention than the condition of those workhouse-inmates who are insane; for the circumstances which call so loudly for reform in the management of "indoor" paupers, especially those who are sick, exist in an extreme degree in the instance of the insane. The upshot of all careful inquiries into these matters, and notably of that inquiry now proceeding in the columns of '*The Lancet*', is to make prominent the fact that those workhouses which are situated in populous cities are rapidly becoming great hospitals, instead of refuges for tired or lazy vagrants: while, as yet, the guardians who manage them cannot (or will not) understand that this is the case, but persist in treating the inmates as much as possible on the old system, by which the workhouse was a penal residence intended to disgust and repress the applicants for public relief. Under such a régime it has been shown that numbers of acutely sick persons suffer great hardship and have their chances of recovering health and strength materially interfered with; while as for the patients suffering from chronic disease and debility, it can hardly be said that they receive any proper care at all; and it is my purpose in the present paper to show particularly that the insane are the most deeply injured of all classes of indoor paupers by the system usually followed.

In the year 1858,\* the Lunacy Commissioners, whose attention had already been directed to the insane inmates of workhouses, made an extensive inspection of workhouses throughout the country;

\* *Vide* 'Supplement to the Twelfth Report of the Lunacy Commissioners.'

and, amongst others, they visited most of the London houses. One good result which followed this action of the Commissioners was the institution of accurate yearly records of the statistics of pauper insanity as treated in workhouses ; and from these we learn important facts. At the close of the year 1858 we find that 1152 insane persons were lodged in the following forty workhouses. Bethnal Green, Chelsea, Clerkenwell, Fulham, St. George's-in-the-East, St. George's Hanover Square, St. Giles', Hackney, Hampstead, Holborn, Islington, St. James's Westminster, Kensington, City of London, East London, West London, St. Luke's, St. Margaret's and St. John's Westminster, St. Martin's-in-the-fields, Marylebone, Mile End, Paddington, St. Pancras, Poplar, Shoreditch, Stepney, the Strand, Whitechapel, Greenwich, Lewisham, Bermondsey, Camberwell, Croydon, St. George the Martyr, Lambeth, Newington, St. Olave's, Rotherhithe, St. Saviour's, and Wandsworth. Five years later, at the close of 1863, the returns show that the numbers had risen to 1560 (an increase of more than 400) in these same forty houses. This augmentation corresponds with a general increase of 1177 in the whole number of insane paupers (in- and out-door) in the metropolitan districts to which these workhouses belong ; but a comparison (at each of the two dates) of the tables indicating the general mass of pauper insanity in the several districts with those recording the number of lunatics treated in the workhouses of those districts, soon reveals the fact, that not merely were the numbers of insane paupers on the increase, but the guardians were changing their methods of dealing with them, and the changes were by no means uniformly in the same direction. Thus, for instance, while the guardians of St. George the Martyr had largely increased the proportion of their indoor to their outdoor pauper lunatics, and had trebled the actual number of lunatics in their house, the boards of Lambeth and Newington had much diminished the proportional, and Marylebone the actual, numbers of indoor insane patients.

The actual number of insane persons treated in the metropolitan workhouses goes on steadily increasing ; on the 1st of January, 1865, there were upwards of 1800 patients so situated ; it is, therefore, a very grave subject of inquiry—To what extent are these unfortunates provided with the special accommodation and treatment which their cases demand ?

In their examination of workhouses made in 1858, the Lunacy Commissioners were led to certain conclusions which may be summed up as follows :—They considered that it would be impracticable to remedy the evils which they had observed, so long as insane persons were detained in workhouses, either with or without special wards for the purpose : that the construction of the workhouses, generally, was such as to offer insurmountable obstacles to the proper treatment of insanity ; and that the removal of the majority of the

insane patients, and the adoption of stringent measures to prevent the admission of others, was absolutely necessary. They pointed out the fact that superficial notions of economy tempted boards of guardians to treat insane persons in workhouses rather than send them to asylums ; but that this feeling was mainly based on an unjust arrangement by which the cost, not merely of board, but of lodging, was charged to the unions on account of their lunatic paupers in asylums. They considered that great additions should be made to the accommodation for insane paupers in borough and county asylums ; but, as many of these establishments were already so large as to render further additions unadvisable, they suggested that small special buildings should be erected for the treatment of idiotic and other harmless lunatics at a convenient distance from the workhouse. In any case, the visiting justices of the asylums ought to be empowered to visit the workhouses, and to order the removal of insane patients from them at their discretion. No lunatic ought to be detained in a workhouse unless it had been specially certified by a justice or an officiating clergyman (after personal examination) that such patient was not a proper inmate for an asylum ; discretion being given to order a lunatic to be received into the workhouse for special reasons of convenience, for a time not exceeding two clear days. A list of all the insane in each workhouse should be kept by the medical officers of the establishments for the inspection of the visiting commissioners, the form of mental affection being specified in each case ; and the visiting commissioners and the poor law inspector should have power to take any lunatic before a justice of the peace, with a view to his removal. The medical officer of the workhouse should have full power over the classification, diet, employment, and medical and moral treatment of all insane inmates.

Such were the recommendations of the Lunacy Commissioners in 1858, and, as far as regards the metropolitan houses, recent experience enables me to affirm that they are as just, and their enforcement as urgently needed at the present time, as when they were written.

There has doubtless been an improvement, in some particulars, in the treatment of the insane in workhouses, consequent on the inspections by the Lunacy Commissioners, and the remarks made in their yearly reports. But to show how slightly the evil has been scotched it will be sufficient to give some account of the present condition of certain London workhouses as regards this matter. St. Luke's, City Road, shall be our first instance, because this workhouse was particularly commented on in the Commissioners' special report in 1858.

It was remarked (in the above-mentioned report) that St. Luke's Workhouse was really to be considered as a lunatic asylum, so numerous were the cases of insanity admitted into it (over 70), and so considerable was the proportion of these cases which re-

quired special nursing, feeding, lodging, and treatment. The Commissioners regarded the house as quite unfit for such purposes, a conclusion in which all would agree who knew what the state of things was in those days. There were then no day-rooms for the insane ; the only apartments they possessed were the two rooms on the ground-floor of the infirmary, which served both as night and day-rooms, and which opened upon two miserable little plots of ground, railled off for the exercise of the males and females respectively ; there were none but pauper nurses ; there was no provision for secluding violent patients ; and there were no means of employing or amusing such as were demented, imbecile, or melancholic. It is not a little instructive to observe the manner in which the guardians of St. Luke's (who are on the whole liberally disposed) have set about the reform which the commissioners in 1858 represented as urgently necessary. In one respect they may be said to have acted with tolerable vigour ; they have for some years past maintained a paid and skilled nurse for the male and another for the female insane patients ; these officers, who have each two pauper helpers to assist them, appear to be equal to the care of the patients ordinarily under their charge. But in every other respect the improvements made were absurdly inadequate. Thus, the day-rooms which have been built are disgracefully small ; at the time of my visit the men had only an allowance of 202, and the women of 135, cubic feet each ; and the rooms were bare and gloomy-looking (especially the men's), notwithstanding the presence of a few pictures on the walls. Amusements, in the shape of bagatelle, chess, draughts, &c., are said to be provided, but there was little appearance of their being indulged in to any considerable extent ; the convalescent women do appear to occupy themselves in sewing, to a certain extent, but for the men there is no proper labour-employment whatever. The needs for seclusion have been provided for by the erection of a couple of padded rooms, like pill-boxes, and of four little cupboard-like "seclusion" rooms, with skylights, but with no outlook whatever ; places which are only fit for keeping linen in. The dormitories are unaltered, and present a gloomy and dismal appearance, which must render them wretched residences for those few poor creatures who are bed-ridden. The general look of the whole insane department at St. Luke's Workhouse is most repellent ; and, without showing some of the worst faults which have been noted in other houses, this establishment is nevertheless entirely unfitted for the numerous melancholic patients who enter it, to say nothing of its inadequacy for the treatment of acute mania. One item of treatment which we strongly suspect to be very defective is the character of the diet, and the amount of extras and stimulants given to recent and violent cases ; for on looking up the medical relief books we found that one particular acute

case, which some months ago stayed in the house for three or four weeks, and was ultimately dismissed to an asylum, was never, during the whole time, placed upon any extra diet, but lived upon the house rations ; moreover, of the whole sixty-five insane patients actually in the house at the time of my visit only eighteen were on any extras, and were it not that the house diet, with an unusual liberality, includes in it a half-pint of home-brewed ale daily for every inmate, the insane would suffer severely from the poorness of their fare. There is also a very objectionable practice, which has been introduced by the surgeon, of using what he calls a stimulant mixture, made with spirits of wine, instead of either wine or brandy, which it almost altogether supersedes ; any one who is at all acquainted with the effects of alcoholic liquors in diseases will know that this is most improper, and particularly unsuitable to the treatment of brain affections, towards curing which the *ethereal* constituents of wine, gin, or brandy, probably contribute a very important share.

If St. Luke's workhouse, which had attracted the special notice of the Lunacy Commissioners so early as 1858, has imperfectly remedied the evils which they complained of, things are far worse with other infirmaries, whose shortcomings have not been so publicly exposed. At Chelsea, for instance, where there are between twenty and thirty insane, there is no separation of these patients from the ordinary inmates ; except that two old noisy male lunatics are secluded in a miserable hole of a room, ill-lighted, atrociously ill-ventilated, dirty, and with most wretched furniture and bedding. Cases of acute mania which may enter the house must be kept in the ordinary receiving-ward, as there are no other means of seclusion—not even a padded room : such patients often remain from three days to a week before they can get their order of discharge to the asylum. There are none but pauper nurses at this workhouse ; the male patients are nursed by male paupers ; and the man who had charge, at the time of my visit, of the two noisy lunatics aforesaid (and who was also nurse of the male itch-ward), was one of the most ignorant and clumsy creatures who could possibly be found for the purpose. Nothing like the proper amusements or employments for the insane exists, and their life must be hopelessly wretched. At Clerkenwell there are eighty-three insane and imbecile patients, the more harmless imbeciles mix with the ordinary inmates, but all the severer cases are huddled together in two wards (male and female) without an attempt at classification, and with apparently no amusements or employment. These wards, especially that for the men, are most gloomy, ill-ventilated and ill-furnished ; there are no padded or seclusion rooms, and the strait-waistcoat is the only resource in cases of violence. There is no airing-ground, except a miserable narrow flagged court between the two blocks of building of which the workhouse is composed ; and altogether it is difficult to conceive

anything more gloomy than the life of the insane at Clerkenwell, shut up in, perhaps, the very worst of the bad old London workhouses.

On the other hand, a few of the boards of guardians have adopted different tactics, and have endeavoured to give to the insane wards of their workhouses something of the character and style of management which distinguishes the public lunatic asylums. A good example of this is to be seen at St. Pancras, and it may be interesting to describe the arrangements here. There are at present forty male and eighty-nine female insane inmates ; the whole suite of wards which they occupy is on the ground floor, and is cut off completely from the rest of the establishment. The airing-grounds are also completely separated by locked gates ; that for the men is a rather confined paved courtyard, but the women have something like a garden, though far too small. The dormitories for male patients are really good, as regards their ventilation ; the female dormitory for forty-six patients is far too crowded ; the day-rooms for both men and women are too small, especially the former. The nursing, especially on the women's side, is very superior to the usual workhouse style, there being two excellent trained and paid female superintendents, and a large staff of pauper assistants, who receive a certain amount of pay, and are generally above the level of pauper nurses : on the men's side there is a very good male superintendent, assisted by his wife, and by a number of pauper helpers. On the male side there are no means of seclusion, except in the padded rooms (which, however, are unusually light and airy), but on the women's side there are two or three small wards, which are useful for this purpose ; but they generally contain more than one patient each. Pictures, newspapers, books, games of draughts, dominoes, and bagatelle, are provided for the enlivenment of the patients, and their friends are admitted to see them two days in the week.

To show how completely the insane department of St. Pancras is becoming assimilated to a great public asylum, as to the character of the inmates, it will be sufficient to record the analysis which I made of the cases upon the medical record between the 1st of January and 9th of July, 1865. There had been 139 male and 127 female cases on the record, between these dates. The male cases were as follows :—Mania 34 ; imbecility 20 ; epilepsy 19 ; melancholia 14 ; chronic alcoholism 10 ; delirium tremens 8 ; idiocy 5 ; chronic mania 1 ; the rest were cases of softening of the brain, or of paralysis ; there had been 20 deaths. The female cases ran thus :—Mania 39 ; epilepsy 25 ; imbecility 24 ; chronic alcoholism 13 ; delirium tremens 1 ; chorea 1 ; melancholia 7 ; puerperal mania 2 ; softening and paralysis 3, &c. : there had been 20 deaths.

Such a list of cases as the above, altogether contradicts the common supposition that workhouses rarely contain any but harmless,

imbecile patients ; on the contrary, it will be seen that the proportion of maniacal cases and of melancholia is very large, and the medical officers of the workhouse gave me to understand that it is constantly increasing ; the cases of delirium tremens and of insanity from drink are also very numerous, and there are a great number of epileptic cases, most of which are very troublesome to manage. To put out of sight the other cases, all these are such as to demand first-rate asylum-arrangements, and it is impossible to consider that such are to be found at St. Pancras, though the particulars we have given above sufficiently prove that great efforts have been made to this end. There are neither the appropriate means of seclusion, nor the adequate nursing-strength, for the management of the maniacal cases ; the melancholic patients cannot be put to those active outdoor employments which are so specially beneficial to their condition ; and the epileptics are insufficiently provided with attendants, the female epileptics, moreover, being placed in a very gloomy and improper apartment. It is also impossible to suppose that the medical staff is sufficient ; the two medical officers are, indeed, unusually active and intelligent, and are apparently quite *au courant* with the modern improvements in the management of the insane ; but when it is stated that they have also to attend to 200 or 250 sick, and 650 infirm, it will be seen that they cannot possibly exercise that sort of supervision over this large colony of insane patients of every grade, which would be given in a lunatic asylum. It is no small praise to them that they have raised the standard of the insane department so high ; but it is impossible for them to bring it up to the asylum level. The experiment which has been tried at St. Pancras appears to be a crucial one, and its results are, I think, decisive ; they prove that the present workhouse system will not bear the additional burden of the treatment of insanity on the large scale, including the management of acute cases. Taking these results, together with the abominable mismanagement of the insane, which still prevails in workhouses which have not, like St. Pancras, been repeatedly stirred up and exposed to public indignation on account of their defects, we may even go much further than this ; for we are led irresistibly to the conclusion, that so long as workhouses remain under the direction of such persons as those who compose the present boards of guardians, the class of insane patients is very limited indeed which may be safely intrusted to their care.

The Commissioners of Lunacy have all along taken this view, and have regarded with very little satisfaction the efforts of some boards of guardians to provide, by the establishment of pretentious-looking insane-wards, with a certain superficial resemblance to asylum-arrangement, for the permanent treatment of large numbers of the insane. They have seen from the first, what the guardians cannot see at all, that there are very few, even of the most de-

graded and hopeless cases of insanity, which are not rendered more degraded and hopeless by residence in a workhouse. Confirmed by their superior authority and information, I shall now sum up the principal evils of workhouse treatment of the insane as it affects the different classes of these unfortunates who are subjected to it.

1. As regards acute mania, it is certain that no case of this affection ought to be brought within workhouse doors at all. If the workhouse be one (like St. Pancras), with pretentious insane wards, with an apparatus of padded-rooms, and a partial provision of skilled nursing, the consciences of the guardians will be easily reconciled to the course, which seems to coincide with their material interests, of retaining the patient altogether, and thus escaping asylum-payments. If, on the other hand, the workhouse is too notoriously unfitted for the treatment of acute cases for this project to be contemplated, then it will almost invariably occur that the patient will be neglected for the few days of his stay there, and will be finally forwarded to the asylum in a much worse state than he was in at the time of his admission, too often in a hopeless condition as to prospects of cure. An acute case of mania in such a workhouse as Clerkenwell, or Chelsea, or St. Luke's, is an unmitigated annoyance ; he is looked upon as a mere bird of passage, yet several days may elapse before he can be got rid of ; meanwhile the surgeon has the mortifying consciousness that he has not the means of treating him efficiently. Too commonly the patient manages to resist all attempts to feed him, and consequently gets little or no sleep ; and it is unnecessary to say that a very few days' continuance of such a state of things reduces the chances of cure to a minimum. Such cases slide on into the chronic stage, and become hopeless ; or, not unfrequently, they prove rapidly fatal.

2. The melancholic patients, who form a considerable proportion of the insane in workhouses, and a large number of the demented, are an especially pitiable class, because they are quite removed from the possibility of getting those simple yet effective aids to treatment which usually have the greatest share in their cure or improvement. Music, dancing, and (for the men) a well regulated employment in agricultural labours, might be their salvation, and would in nearly all cases do good ; but these things are, of course, quite unattainable.

3. The demented, the epileptic, and the paralysed, require an amount of care to ensure personal cleanliness, and to prevent them from becoming more degraded in every way, which boards of guardians and over-worked parish-doctors can have no adequate idea of.

4. The large number of patients suffering from delirium tremens, or else from "chronic alcoholism" are very difficult to manage with a view either to cure or to the amelioration of their condition, and

it is impossible that they can receive this sort of care except from doctors and nurses who have had large opportunities of specially studying their malady. Nothing is more hopeless than the state of a drunkard who has begun to pass into the demented condition and is thereupon placed in the workhouse infirmary. It is all over with him, for the workhouse traditions of the proper treatment of such cases consist of the simple direction to "cut off his liquor."

5. Finally the idiotic, of course, require special *education*, and do *not* get it in workhouses, nor even in the comparative excellent district schools.

In short, there appears to be but one conclusion open to us—that none but the class of harmless imbeciles who are devoid of dirty habits ought to be retained in workhouses; and the point to be especially remembered is that this class forms a much smaller proportion of the total number of insane in metropolitan houses than is generally supposed. The commissioners point out the difference in this respect between country and town workhouses, the former containing a very much larger number of cases of imbecility from age, and of congenital weakness of mind, while the metropolitan districts furnish a few larger number of actively troublesome cases. There can be no doubt then, to speak now of London merely, that a very large extension of building accommodation for insane paupers must soon be undertaken, and, at the same time, it is not desirable to settle the difficulty by the rude process of simply adding to the size of the present county asylums. Now is the time for some one with talent for, and special knowledge of, the subject of buildings for the insane, to devise suburban cottage asylums which would be appropriate half-way houses, as it were, between the workhouses and the county asylums; and we may fairly ask the superintendents of asylums to give special attention to this subject, which is rapidly becoming most important both to the profession and the public. The gist of the brief remarks which I now bring to a termination is this: that the old plan of managing the insane in workhouses, which still persists to a great degree in the worst-managed houses, is simply brutal in its stupidity and cruelty, and most suicidal as regards the paltry aims at economy which the guardians are always chiefly led by; and that, on the other hand, the attempt to keep lunatic asylums of their own, by merely extending and somewhat improving the insane-wards of their workhouses, is a complete and fatal mistake. Such experiments as that now making at St. Pancras workhouse only need to be observed by any one who is disinterested in the matter; the sentence of any such judicial observer must be finally and decisively against them; meantime these experiments are likely to be extended on such a large scale within the next few years that immediate interference on the part of those whose position as alienists gives them a right to speak with authority is most urgently

required. As an outsider in this matter, and merely looking upon this particular question, as one aspect of the general subject of pauper infirmaries, I leave these suggestions in the hands of those who have the ability and knowledge, and it may be hoped the intention also, to bring these important questions to a speedy solution.

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*Epileptics: their Mental Condition.* A Lecture,\* by W. A. F. BROWNE, Commissioner in Lunacy for Scotland, President-elect of the Medico-Psychological Association, &c.

"On en est même venu aujourd'hui admettre que tous les épileptiques, sans exception, présentent, à certain degré, des perturbations de l'intelligence ou du caractère, et qu'aucun d'eux ne peut être considéré comme absolument sain d'esprit. [p. 661.] \* \* Cependant tous les auteurs sont d'accord pour reconnaître que la plupart des épileptiques présentent, à divers degrés, des troubles de l'intelligence et du caractère dans le cours habituel de leur existence, en dehors de leurs attaques convulsives." — "De l'Etat Mental des Epileptiques," par le Dr. Jules Falret; 'Archives Générales de Médecine,' t. ii, 1860, p. 668.

ONE reason that has prompted me to address you upon the subject of the mental condition of epileptics is that for two consecutive years I offered, with the cordial concurrence of Professor Laycock, a prize to his class for an essay on "Psychical Aspects of Disease," for which no competitor appeared. The signal failure of the proposal confirmed me in my opinion that the profession disregarded such an element in observation and diagnosis, that the subject was foreign to such studies as are at present encouraged, and that new efforts were required to direct attention to states of the system having a powerful but unestimated influence upon disease, themselves directly or indirectly signs of diseased conditions, affecting most intimately and gravely the comfort, the happiness, and the sympathies, as well as the ultimate fate, of the patient, and without a knowledge of which no physician could fully comprehend either his powers or his duties, or perform the *whole* of his glorious mission.

You must not misinterpret the phraseology employed. The psychical aspect of disease is not intended to convey the moral exaltation or depression, the natural hopes and fears, the fancies and foibles and irritabilities, not even the religious anxiety or confidence attendant upon unhealth and infirmity, although I do conceive these

\* Read before Professor Laycock's class of Medical Psychology, at their visit to the Inverness District Asylum, July, 1865.

to be legitimately within the sphere of our observation and ministration ; but it refers to morbid mental changes concomitant with, and in some, perhaps in all, cases characteristic of, the changes going on in our organization, and, in proportion as they may be regulated or directed, controlling or accelerating that degeneration which terminates in death or incapacity. It is well known that there is an inextinguishable hope and trust in life, an ever-dawning and noon-day confidence in phthisis ; that there is a panic, a fear of evil and death darkening and disturbing the life, penetrating even into the dreams, of the sufferer from cardiac disease ; that scirrhous is both ushered in, and accompanied by, care, anxiety, and grief. Dr. Todd, with that originality which marked much that he did, sketched a classification of delirium, creating ten species, including the renal, hysterical, anaemic, traumatic, rheumatic, toxic, &c. His system was founded rather upon the cause than upon the phenomena of the mental disturbance ; but although never developed further than in clinical teaching, involved the principle here contended for. But this knowledge has neither been extended nor utilised. This accusation is launched chiefly against ourselves. The literature of France is rich, and daily becoming richer, in this department, and especially in the matter of our present inquiry ; on this subject it abounds in monographs and philosophical disquisitions ; while Beck, Paris and Fonblanche, Ray, Cooke, Radcliffe, Sieveking, and Guy (the text-book in your own university) contain little more than a brief allusion ; and Dr. Russell Reynolds directs his remarks to a limited but most important aspect of the inquiry, electing failure or integrity of apprehension and memory as the test of the mental condition. In harmony with this view, I have selected for illustration the psychical aspects of a disease generally treated as nervo-muscular, but including affections of the mind involving the reputation, liberty, and life of the individual.

I am bound to conclude, from your position in the university, that you are somewhat familiar with the symptoms of an epileptic attack, and, from your being pupils of my distinguished friend Dr. Laycock, that you have heard of the mania which so frequently follows. Notwithstanding these advantages, it is possible that you have never witnessed the series of symptoms designated by the word. Individuals have succeeded in concealing that they were subject to such an appalling affection ; members of the same family may never witness the rare and brief, and often nocturnal, indications of the malady which they know to exist. Physicians are called in to treat the latter stages and effects only in an asylum, the only place where the disease can be studied ; accident rather than arrangement brings the attacks under notice ; and, as a pertinent illustration, I understand from the medical officer here that there is a patient in this house labouring under a modification of the disease, but that, not-

withstanding all the vigilance and solicitude bestowed, he has never succeeded in observing its recurrence.

So far as our present purpose is concerned, we shall represent epilepsy as consisting of mental disturbance, generally consisting of obscured consciousness, sometimes of long duration; of a premonitory sensation or aura, in the great majority of cases being an abnormal condition of the *cœnaesthesia*, independent of external stimuli; a pallor of the face; a cry; entire loss of consciousness; contraction of the muscles; the thumb is placed in the palm of the hand, the fingers are fixed, and the arm, say the right, describes a rotatory movement so forcible as sometimes to produce luxation. The sterno-cleido mastoid is convulsed; the head is turned to the opposite side; the muscles of the face are twisted towards the side chiefly affected; the eyes and lips are distorted, and the aspect becomes hideous. Respiration is suspended; the pulse slightly quickened; the chest fixed. Suddenly the face becomes red, purple; the veins of the forehead swell, and there is often an involuntary discharge of urine, spermatic fluid, and faeces. Sometimes the teeth are firmly set, sometimes the mouth remains half open; the tongue, being protruded, is wounded; the lips are covered with a frothy and often bloody saliva, which is projected by the returning respiration. The tonic spasm lasts from ten to sixty seconds, and is followed by the alternate relaxation and contraction of the muscles, during which the same features are observed. This stage may be from one to two minutes in duration, then follows complete relaxation; a deep sigh; the head falls powerless to a side; stertor; coma, and partial or entire unconsciousness, even after the coma has ceased. From the stupor the patient is suddenly or gradually roused to a state of madness, stupidity, or temporary dementia, or what is termed his lucid state; in all these conditions there being an impairment of consciousness, judgment, volition and memory, the powers by which we recognise and recall impressions, whether objective or subjective, and by which we regulate our thoughts, opinions, or acts, in relation to these impressions, or our interpretation of them. The duration, the intensity, and the number of these indications, vary infinitely; but, except in so far as such differences may affect the state of the mind, we shall not regard it as a duty to enter into them, nor into the physiology nor pathology of these indications. I shall assume that you are conversant with the theories of Schroeder van der Kolk, of exalted action of the spinal cord; of Radcliffe, of interrupted vital or electric force, and so forth; and shall endeavour to confine your attention to this single but most comprehensive proposition, "Is every epileptic of unsound mind?"

Esquirol has given the following statistics to illustrate the comparative frequency of the association of epilepsy with the different forms of mental disease, whether present as a cause, a symptom, a consequence, or simply as a complication, for it may stand in any of

these relations. Of 339 females in Charenton, 12 were monomaniacs, 30 maniacs, 34 furious, 145 demented, 8 idiots, 50 habitually reasonable, but afflicted with frequent loss of memory, and 60 exhibited no aberration of intelligence; one fifth preserved their reason; but, he significantly says, "what reason?"\*

Our inquiry is not whether epilepsy generally leads to mental disease, but whether it be a symptom of that cerebral condition of which mental disease is likewise a symptom or expression; whether it ever occurs without interruption to the mental functions at the time, and without permanent injury. That injury may be great or small, removable or irreparable, known to the sufferer only or obtruded upon those around prominently and offensively; but does it invariably involve such a modification of the mental constitution of the individual as to affect his dealing, and his capacity to deal, with the ordinary concerns of life?

It has been held that the epileptic is not insane in the legal sense. He may display talent, acuteness, even the attributes of genius. His disease may be of short or long continuance, and it is most difficult to determine how long it may continue, even when there is no convulsive attack; but it is argued that the mind is weakened, perverted; the judgment, the sense of right and wrong, and consequently the responsibility, directly or indirectly weakened and perverted; it may not be to such a degree as to exonerate the individual from all culpability or all penal consequences, but assuredly to such an extent as to demand consideration and allowance in every transaction, and in every judgment as to motives, convictions, and conduct. "All authors are agreed"—I quote the words of Bail-larger—"in admitting the fact that epilepsy, before leading to complete insanity, produces very important modifications in the intellectual and moral condition of certain patients; these sufferers become susceptible, very irritable, and the slightest motives often induce them to commit acts of violence; all their passions acquire extreme energy."† The point to be now considered is whether there are any and what grounds for holding that this irritability, these acts of violence, should be referred to disease.

If the brief sketch of a single epileptic attack has been followed, it will have been observed that there are a number of morbid psychical phenomena which claim examination. There is, following the incubation, in order of succession and time—

- I. An exalted susceptibility to external impressions.
- II. An aura, affecting some of the external senses, which is not necessarily connected with these impressions.
- III. Coma.

\* 'Maladies Mentales,' t. i, p. 274.

† 'Ann. Médico-psych.,' Avril, 1861.

IV. Excitement, or fury, or the performance of automatic acts.

V. An abnegation of consciousness during all these conditions.

VI. Change in disposition, partial enfeeblement of powers, of which the patient alone may be aware.

VII. Dementia.

Dr. Russell Reynolds, confining his statistics to such patients as are sent to asylums, found that the memory was normal, or affected only after the fits, in 43·85 per cent., and more or less defective in 56·14 per cent. Apprehension was normal in 62·5 per cent., defective in 37·5 per cent.\* In this calculation, however, Dr. Russell Reynolds has recorded merely the *results*, the signs of dementia, in long-established epilepsy, and has not included the pathognomonic feature, *loss of consciousness*, except in so far as memory is concerned, which he recognised in his diagnosis.† These conditions differ widely in degree and duration, and especially the mania or maximum departure from health, and are not necessarily met with in every case. But in whatever manner combined, and however brief the characteristic element is—imperfect or suspended consciousness—in other words, a cessation of that thought and emotion which regulate our rational acts, of which the mind itself takes cognisance, which are preserved by memory, constitute part of the continuous course of our mental existence, and form the internal measurement of time. There is a portion of each epileptic's moral life during which he has not lived, of which he has no record nor experience, such as other men have; not even of transactions, and these of grave importance, in which he has shared or seemed to share. It is expedient to keep very distinctly in view this psychical characteristic of every form and stage of epileptic insanity. It matters not what the previous strength of capacity or range of acquisitions may have been, nor whether the patient be struck by terror or lashed into fury; nor whether these aberrations last for a moment, an hour, weeks, months: there is ever present a suspension of mentalization or of the consciousness of mentalization, and of the powers to recall the events, either personal or relative—in other words, the impressions imparted by events—while the mind is in that state. There is a gap in our moral nature; there is a hiatus in time; the patient has lost what others have received; and in order to regain his equality with his fellow-men he is necessitated to join together, to connect, the period when he ceased to receive and that when he began again to receive intimations of consciousness. In the transitory stupor of the *petit mal* no conscious thought is present, no emotion arises; even

\* 'Epilepsy: its Symptoms, Treatment, &c.,' p. 44.

† Dr. Russell Reynolds's definition is "a chronic disease, characterised by the occasional and temporary loss of consciousness, with or without evident muscular contractions."—'Epilepsy, its Symptoms, Treatment,' &c., p. 32.

pain ceases ; and the individual ceases to be, morally. During the premonitory stage of confusion and perplexity, when the patient wanders abroad without purpose, commits eccentricities ; during the convulsion and the mania, in which the epileptic wakens up ; there is either an abolition of consciousness or an abolition of the impressions received into consciousness ; and when the evil is consummated and dementia is established, the mind has ceased to be. It is here worthy of record that an epileptic reputed to be sane will express great dubiety as to the clearness of his perceptions, even previous to the premonitory sensations. These observations, though applicable, are not applied to the coma, inasmuch as coma is common to other diseases ; but to that abolition or imperfection of consciousness which is detectable in the *petit mal*, as well as to the abortive fit, the initiatory and concluding stages of the true fit, and the fatuity which succeeds. This is a consideration of moment, for during even the brief duration of this condition, and when the mind neither originates nor receives consciously, grave acts may be performed, compromising the position and character of the individual. I have known this state consist in the utterance of obscene words by those naturally "pure of heart." I have seen a victim rise, panic-stricken, from sleep, and flee from imaginary foes to imaginary friends. I have heard described strife and struggles and extravagant gestures, which might have as readily dealt death or injury to those around as been expended on the unresisting air. There are facts which show that suicide has been committed under the impulse of such seizures, as well as during the state between sleeping and waking. In all other forms of alienation, or nervous diseases, there is, less or more, a knowledge by the actor of what he is saying or doing, and a recollection of what has been said or done in relation, it should be understood, to his real or his imaginary position. In epileptic derangement it may, on the other hand, be sharply and succinctly affirmed that there is no such knowledge ; that this oblivion is pathognomonic ; and where there is, occasionally, a departure from this law the supposed remembrance will be resolvable into a delusion or a dream. Dr. Sieveking states, "A gentleman under my care informs me that he at times remembers having dreamt during the fit, showing that the complete abeyance of the mental faculties does not always exist."

The aura is of various kinds ; it may consist of violent gusts of passion, lust, voracity ; of pain passing from the periphery to the centre, in the epigastrium, or a limited spot on the surface ; in flashes or circles of light, red colours ; delicious or disgusting odours ; sweet or salt saps. The aura, or what may be an aura, may exist alone, and, although of a genuine epileptical origin, may not be followed by a fit. But are not such sensations intimately allied, if not identical, with hallu-

cinations? They are real impressions erroneously interpreted, and in this relation it should be kept in view that in the same individual, at more advanced stages of the disorder, the pain is attributed to the assaults of unseen enemies, the flashes of light are intensified into the flames of a conflagration, or of martyrdom; the red colours into seas of blood, and the tinnitus aurium into articulate warnings. Whatever the emotion which has been the cause of the disease, or whatever has been the predominating thought or sensation, or misinterpreted sensation, coincident with the commencement of the malady, is reproduced in all succeeding attacks. In those reputed to be sane the *petit mal* has followed what prove to others pleasurable or indifferent impressions. Orfila narrates the case of Vincent, the painter, who invariably became affected when the perfume of roses reached him. Voltaire tells of an officer who was convulsively moved by that of pinks. Boyle lost consciousness on hearing the splashing of water. The aura remains then the same; and where that has acquired the relation of an objective form or object, the same apparition or guardian angel rises in consciousness as the mind attains its highest, or a particular, degree of perturbation. This is perhaps nothing more than, or different from, the invariable association of certain forms and stages of ordinary insanity. I have often observed in a series of epileptiform convulsions, whether in true epilepsy or general paralysis, that at the moment of most perfect and healthy lucidity—as if the stimulus of the intellectual act served as an exciting cause—a new invasion supervened. Every powerful and distinct emotion produces the same effect, and every internal or external impression may be pregnant with fear or a loss of mental equipoise. Should this be a correct exposition, and there is no reason to doubt it, the frequency with which a sensitive organization must be exposed, not merely in the processes of its own constitution, but in contact with the world, to sources of disquietude, cannot be questioned. One author asserts—“Fear determines two thirds or even three fourths of epileptic cases.”\* Other observers give the following proportions:—Leuret has recorded a timid disposition as a predisposing cause in 16 out of 75 cases. We find 30 cases in 86 attributed to fear by Maisonneuve; 27 in 70 by Bouchet and Casauvielh; 45 in 100 by Beau,† &c.

The *petit mal* may deserve the designation of a mental aura, and it may be observed that the vast majority of such warnings are subjective. This state is nothing more than a brief arrestment of thought. An organist stops while playing, for seconds or minutes, and resumes without omitting a note, and exactly where he ceased, with no consciousness of the interruption, nor recollection of the

\* Bost, p. 79.

† Delasiauve, p. 213.

loss of time. A card-player pauses at the moment he is about to throw a card, gazes steadily on vacancy, and then plays the right card. An architect, while traversing a plank in the scaffolding of a building, runs quickly across, pronounces his own name repeatedly, and knows, from the anxious looks of the workmen, that he has had an attack. In speaking or reading, a sentence or word is abruptly broken off, and, while all are wondering at the hiatus, the lips articulate the word or syllable necessary to complete the meaning of the speaker. Words or parts of words are omitted in writing, or the ideas of a copiest may be substituted for what is before him. This error would point to a continuance of subjective thought during the suspension of consciousness of external relations. I have known twenty or thirty successive attacks of suspended consciousness occur in one day, and these are not necessarily brief nor transitory. Epileptics gaze on vacuity for hours.

The greatest injury to the intellect is not inflicted by the most frightful and frequent convulsions, nor when the mature and muscular man struggles like a chain-bound Hercules. Absence of mind, momentary obliviousness, vertiginous feelings, a pause, a stoppage, an intermission in consciousness, such as has been described as the *petit mal*, as surely and swiftly produce enfeeblement. This was the conviction of Esquirol. It has been corroborated by many of equal discrimination.

"V—, æt. 22, was arrested in Paris, at eleven at night, for having wounded with a knife, without appreciable motive and without provocation, a girl of the town, whom he had met on the street. When examined next day he deposed as follows:—He had a very indistinct recollection of what happened both before and after the crime; of the moment of its commission he had no knowledge nor recollection. He recalled only one thing, and that was that the knife in some fashion acted of itself. In his flight after the act he had no idea of what he had done, nor until he had gone a considerable distance did he begin to have an indistinct notion of what had happened. The history of the youth was as follows:

"He did not belong to a family in which epilepsy or insanity had appeared. He suffered from typhus fever three or four years previously. He had not been subject to headache. He was often subject to giddiness or stupor, when he was obliged to seize upon some object to prevent himself from falling. It was as if a cloud passed before his eyes. This occurred, upon one occasion, while he was speaking, and stopped him. These attacks returned two or three times a day. He sees blue or red balls floating before him. He is subject to tremblings, which may continue for about a quarter of an hour. He has had a sudden feeling of distress at the throat. He declared that his memory was bad; there are moments when it passes away altogether. His employer often sent him with messages

which he forgot by the way. Sometimes he forgets even his ordinary work. When he reads he loses all conception of what he reads; although fond of this amusement, he has for several months been unable to read. He cannot tell whether he is subject to transitory incoherence. He pretends to be a somnambulist during the night; while working, gloomy ideas are suggested, and he has thoughts of suicide, and for a year and a half he has often been tempted to throw himself from the bridges. This tendency arises suddenly—he cannot say how, or why. His father died in February last. Four days previously he had attempted to poison himself with a narcotic. He remained for three days locked into his room. He was not habitually passionate, and had never broken anything. It often happened that he left his work abruptly; wandered, without object, about Paris, or its environs, but never lost his way. Upon one of these occasions he made a journey to Amiens, neither entering a house nor eating anything for two days. Upon the day of the assault he had wandered in the country fasting. At the close of the inquiry V— was sent to Bicêtre, as an epileptic lunatic. He was found irresponsible for a motiveless and unpremeditated act committed in a state of delirium connected with vertiginous, but not with formed, epileptic attacks.”\*

It is quite obvious how important the bearing of this truth, for as such we must accept it, is in considering these gradual, insidious, imperceptible moral changes which we believe to follow in the train of epilepsy. And should such brief suspension occur in individuals of solitary habits, in those whose pursuits or position deprive them of associates and of anxious observers of their deportment, the ultimate effects only will be detected, and detected under circumstances which render alleviation impossible. The memory of the sufferer affords no light. But to continue this investigation—should such suspensions, the hidden seizures of Marshall Hall, as is often the case, disturb sleep or form part of a dream—for even true epilepsy occurs during sleep—it would be vain to adduce them as explanatory of subsequent conduct, as they would be denied and repudiated even by the patient. Often there is nothing but disordered bed-furniture, or a trace of blood or saliva upon the pillow, to mark such an event. M. Troussseau was consulted by a newly married couple. The lady stated that, a short time after their union, she had been suddenly awakened during the night by the strange movements of her husband. Suddenly she was attacked, and, had she not been succoured by a servant, she would have been severely injured. This assault was repeated a few days before the physician was applied to; and, upon the latter occasion, the wife awakened in time, and, having lighted a candle, witnessed her husband’s con-

\* Falret, obs. x, p. 478, t. xvii, ‘Archiv. Gén. de Méd.’

vulsions and escaped from the fury which immediately followed. The patient was perfectly conscious of something having happened to him, of which he could give no account; and he admitted that frequently, previous to marriage, he had been subject to vertiginous feelings, which had been misunderstood by his physicians.\* In certain cases fits only take place during the night, are successfully concealed from the public, even from intimate relations, and the clear and coherent citizen during the day may be a wreck and ruin, a half-witted convulsionnaire, during the night. It is said that the solicitude of those around has kept even the sufferer in happy ignorance of his actual misfortune and impending doom. So keenly alive was Lelut to the secrets which night and seclusion and solitude might reveal, that "Il voudrait que dans les prisons preventives et les maisons d'arrêt on signalat toujours au médecin et au directeur, les moindres anomalies mentales des inculpés, afin q'eclairés par cette enquête les défenseurs et l'administration puissant empêcher qu'on opprimat le droit par le abus."†

In confirmed and long-recognised epilepsy, where the attacks recur with a regular periodicity, where their invasion is announced by the ordinary prodromes, where the patient is under constant observation, it has been repeatedly noticed that no convulsion takes place at the expected time; but that it is replaced, or represented, by what appears to be a substitutionary or vicarious disturbance of the nervous system. These analogues may be moral or physical. They may be ushered in by an aura, by the peculiar cry, but consist in the instantaneous development and subsidence of fury, in panic, in hysterical gesticulations, in weeping, in gaps in memory, or in nothing more than mere restlessness, irritability, and pervigilium. But during these vacuities marriage and the most important events have been participated in and utterly forgotten. When epilepsy, or its most obvious and appalling symptoms, have been removed, these conditions, or some of them, remain; or when, with or without the aid or interference of art, the fits have become rare, separated, perhaps, by months or years, these, or even slighter changes, give testimony of the continuance of the disease, and mark very distinctly the seasons at which a violent explosion would previously have shaken and ruined health.

"A peasant, born at Krumbach, in Swabia, of parents of infirm health, æt. 27, unmarried, had been subject to frequent attacks of epilepsy since he was eight years old. For two years the disease, without any known cause, changed its character. In place of convulsions, this man found himself seized with an irresistible tendency to murder. He felt the approach of this paroxysm for many hours, sometimes a day, before the invasion. From the moment of this

\* Legrand de Saulle, 'La Folie devant les Tribunaux,' p. 391.

† Delasiauve, 'Traité de l'Epilepsie,' p. 488.

presentiment he earnestly demanded to be tied or chained, in order to be prevented from the commission of a crime. ‘When I am attacked, I am impelled to kill, strangle, were it only an infant.’ His father and mother, whom he loved tenderly, would be the first victims of his impulse. ‘Save yourself, mother, he shrieks, ‘save yourself, or I shall choke you.’ Before an attack he complains of being overcome with sleep, cast down, and experiences slight convulsive movements in the legs. During the attack he preserves a clear notion of his personality, knows that in committing a murder he is guilty of a crime. When bound, he makes frightful grimaces, sings, repeats verses. The paroxysm continues for a day or two; when over, he asks to be released, and expresses thankfulness that he has destroyed no one.”\*

Dr. Schupman relates the case of an epileptic whose paroxysm was marked by a remarkable intensity. “He was attacked with cholera, which weakened him very much, but which terminated in recovery. Scarcely convalescent, he became agitated, restless, conceived that he felt some living thing moving in his stomach, and, penetrated by this idea, at length declared that he was pregnant. The slightest contradiction led to such violence that it was necessary to fix him to a chair. Many expedients were resorted to in order to eradicate this absurdity; they even imitated an accouchement, and then observed great excitement of the organs of generation. All was in vain. He retained his delusion. Pervigilium and great restlessness succeeded, but quiet and rest were ultimately obtained by means of large doses of Opium, Camphor, and Nit. Pot.; but the fixed idea remained. It only disappeared on the return of the attacks of epilepsy, which, during the alleviation, had ceased, their absence being the cause of the delirium.†

The doctrine of masked epilepsy has been taught, or known, in this country for a quarter of a century, but has not been so clearly formulised as in Morel’s article upon ‘*l’Epilepsie Larvée*.’ It must not be confounded with the series of morbid phenomena described above, where the convulsion is succeeded and supplanted by mania, neuralgia, agitation, &c. In the affection described by Morel epilepsy is present, undeveloped, unmanifested, but yet produces in the patients the same mental and moral disturbance as when it is marked by vertigo and convulsions. The symptoms of this epileptic insanity without epilepsy, or where the epilepsy is only observed among the advanced or ultimate features of the malady, are enumerated as follows:—Periodical excitement, followed by prostration and stupor; excessive and motiveless irascibility;

\* Esquirol, ‘*Mém. sur le Monomanie homicide*,’ p. 831. Fact quoted from Gall.

† ‘*Journal de Psychiatrie*,’ ii, cahier 47; ‘*Ann. Médico-Psych.*,’ 2nd series, t. i., p. 301.

the perpetration of aggressive acts, having the character of sudden and irresistible impulses; exaltation of sensibility; alternations of delirium and cerebral excitement; exaggerated ideas of strength, riches, beauty, intelligence; fear-inspiring hallucinations; association of erotic tendencies with religious sentiments; sensation of a luminous atmosphere; frightful dreams; nightmare; gradual weakening of mind, and, above all, of the memory; loss of recollection of what was done during the paroxysm; the reappearance of the same delirium during each periodical return of the morbid phenomena; and, lastly, the violence and duration of the delirium being proportioned to the duration of the remission.\*

In incomplete or abortive attacks, which present no affection of the muscular system, but appear in place of such, the patient loses all connection with the external world, utters hideous inarticulate sounds, jargons, words without connection, which indicate terror or some profound emotion. But of these events there is either no recollection or a dream-like recollection. "There are, moreover," writes Falret, "certain incomplete attacks of epilepsy which hold a middle place between simple vertigo and the complete attack during which, in the interval between the convulsions, the patients appear to be conscious of what is passing around. They speak and act in such a manner as to inspire doubt as to the real nature of these attacks, and to attach to what is said and done in this peculiar state of the nervous system a character of moral liberty to which they possess no title. This singular mental condition resembles in many respects somnambulism and other extraordinary nervous conditions. It may be equally compared to a state of dream." A. C. was long under my care. Her case presented the following salient points. She was subject to attacks of hysterical epilepsy, sometimes resembling syncope or lipothymia, during which, after great restlessness, the activity of the external senses and of consciousness were suspended, while the circulation, respiration, &c., continued undisturbed. The muscular system was, at such times, powerless and relaxed; but she never had true convulsions. Her ordinary, or lucid state, was one of capriciousness, jealousy, mendacity, malignity, and obscure eroticism. The eroticism is designated obscure, inasmuch as it was in no other manner manifested than in struggles, or in resistance to compulsory alimentation, to which she resorted in order to necessitate the approach of individuals of the other sex to her person. Such struggles often appear to take the place of involuntary muscular contractions. There was, however, remarked a more interesting feature. She often passed many hours in a waking dream or trance, in which she generally acted absurdly, spoke vaguely and menacingly, failed to

\* 'D'une Forme de Délire, suite d'une Surexcitation nerveuse se rattachant à une variété décrite d'Epilepsie. Epilepsie Larvée.' Paris, 1860.

recognise the persons and places around, but was capable of willing and performing various complicated transactions. These occasions were utilised as affording opportunities for removing large numbers of pins which she was in the habit of collecting in the sulcus between the cheek and the jaw. Although a deceiver, she had no object to gain in simulating somnambulism, nor, supposing the existence of an object, had she capacity to sustain such a deception; while her astonishment at the lapse of time, and the abstraction of her store of pins, on regaining her active mental state, was believed to be perfectly genuine and sincere. But, however long such a trance might last, and however numerous and significant her sayings and doings during its continuance, her memory preserved no trace of the series. These hours were a complete blank. At a certain stage in the progress of her malady it became difficult to determine whether she was vigilant or not, whether what she did was known to herself, and would be recollected or not. She ultimately recovered. "A remarkable phenomenon," Falret continues, "which frequently takes place in incomplete attacks of epilepsy, or in the interval between two complete attacks, demands attention. The patient appears to have come entirely to himself; he enters into conversation with those around, performs acts which appear to be dictated by the will, and seems to have recovered his normal condition, yet when the series has actually terminated, and the individual is actually in possession of his reason, he is found to retain no recollection of his words and acts during the interval."\*

The connection of such a succession of events with the volition and responsibility of the individual is very obvious. Nor do these modifications involve the doctrine of the transformation of disease, for they must be regarded as states of the same disease aborted, imperfect, undeveloped; or as more highly developed and advanced stages in the process of degeneration.

The chain which has been traced out demonstrates that such patients were at no time perfectly sound or altogether exempt from the influence of accidents which are as much parts of the malady as muscular contraction, and, perhaps, as important parts of the malady in disturbing, or guiding, or governing the moral nature or in precluding all guidance and governance whatever. How far, or whether to the same extent and intensity as a fit, a momentary terror should affect the sayings, and doings, and thinkings, for days and weeks after it has passed away, cannot be well determined except by the estimate, perhaps the exaggerated estimate, or, at all events, an estimate open to suspicion, of the sufferer; but that such a state, taken as it should be as one of a series, must act detrimentally upon the mind, and must be accepted as a sign of habitual

\* Falret, 'Archiv. Gén. de Méd.', t. xviii, pp. 430 and 431.

and established mental action which removes him from the category of healthy minds, cannot well be gainsayed. But even if this view be not carried out to what may prove to be its legitimate extent, it is indubitable that, *during* the accession of such exceptional states the patient is unable, or less able than at other times, to regulate either his ideas or his conduct; and that he may at the time fairly be regarded as passing through a paroxysm of epilepsy. Such states, again, exist as the sole expression of nervous disease, and where no convulsion is or ever has been associated with them. When this is the case they may sometimes announce, and are part of, greater evils, but at present they claim attention as specific and independent phenomena.

We have often compared the fury of the epileptic maniac to the rush of a runaway locomotive. It is not only that he throws himself headlong against all opposing objects and forces, regardless of himself and them, overturning, crushing, destroying, but that he is endowed with strength which is as irresistible as his murderous instinct is dangerous. At large he would be a destroyer; in a padded room, doors, walls, fall before his force and fury.\* André and others have related cases where the orgasm was manifested in a sudden start and race forwards, in a straight line, until the patient was brought up by a wall, or a ditch, or by exhaustion; and then, however marred and mutilated he might be, deep unconsciousness prevailed. I have seen only one case of this kind. An epileptic is the most powerful as well as the most dangerous of lunatics. The mania is almost invariably destructive, often homicidal. Georget and Bucknill have adverted to the frequency of the association of epilepsy with the homicidal impulse. Trousseau, rushing into the region of hypothesis, holds that the mere commission of a motiveless, aimless, unpremeditated murder "est presque certainement le résultat du choc épileptique." (*Discours à l'Académie de Médecine.*) It may, however, be affirmed that wherever there is abstraction or absence of mind, arrestment of the course of thought, double consciousness, sudden impulses inconsistent with the ordinary character and otherwise unaccounted for, there is reason to suspect the existence of epilepsy. Suicides, perhaps involuntary suicides, have been recorded, but their rarity is obviously due to the prevalence of dementia as the longest-continued form of alienation among epileptics. If a man so affected knocks his head against a table, and knocks both head and table to pieces, he is designated, and correctly, a madman; but if he knocks another man's head against a table with the same result, he is, somewhat inconsistently, apprehended and tried as a criminal. But what is more extraordinary still, M. Falret, whose

\* "Many of the acts—under ordinary circumstances voluntary—during a series of epileptic attacks—partake of the involuntary irresistible character of the convolution."—Falret, 'Archiv. Gén. de Méd.,' xviii, p. 430.

writings upon this subject are in general judicious, argues that if an epileptic knocks his neighbour's head to pieces he shall be held to be criminal; but if he breaks his neighbour's table he shall be held to be insane, and therefore guiltless; in fact, supporting a plea for criminal responsibility and civil irresponsibility.

One of the first and most prominent complications of epilepsy is with idiocy. It has been supposed, upon the authority of mothers, that the foetus was convulsed or turbulent in the womb; it is certain that newly born children have been affected, and almost contemporaneously with separation from the placenta, with epilepsy; and the fact that some of these cases were paralytic appears to countenance the maternal belief that intra-uterine disease had existed. Such disease, in whatever state of the nervous system it may ultimately consist, is often traced back to a particular time, to a moment during gestation, and to the agency of some powerful emotion experienced by the parent. Fallacious although their evidence may be as to the dates and their theory as to causes, the all but unanimous conviction that this impression was terror, physical or moral, establishes a connection which cannot be altogether attributed to fancy. Howe states (p. 78)\* that the mother was subjected to fright or grief during pregnancy in 53 of 108 cases reported. Bouchet and Casauvielh found that epilepsy could be traced to fear in 21 of 69 cases.† Bearing in mind that mental emotions, and especially those of an overwhelming power, and, above all, those of morbid origin, are more propagable than the form of body with which they may be connected, we must here allude to the predominance and rule of certain instincts in the mind of the epileptic. These are, or appear to be, pathognomonic, whether in the idiotic or mature epileptic. They are chiefly fear, sometimes arising as a blind panic, sometimes inspired by hallucinations at the time of the incursion of the attack; blind, furious rage during the excitement and agitation which succeed; and erratic, unregulated, and extravagant propensities and volitions which prevail during the interval.

The convulsion may stand in relation to the imperfect intelligence as a cause, as a co-ordinate affection, or as a consequence. In whatever light it may be viewed, this intimate and frequent association supports the opinion that the phenomena of idiocy cannot be regarded as those of undeveloped, but as those of perverted and diseased, mind. It will not do to deal with this epileptic Idiot viewed as a seed, a bud, a child, for whose progress and growth nothing is wanting save the light and heat of the sun tide of education and knowledge, under which the seed will spring up into the tree, the bud expand in beauty and effulgence, and the child into the godlike attributes of wisdom and virtue. In sad and sober earnest, large numbers of

\* 'On the Causes of Idiocy.'

† 'De l'Epilepsie,' &c., p. 76.

this class cannot feel, see, speak, walk, even sit ; cannot swallow until the bolus be placed within the pharynx ; cannot control the sphincters, and are physically incapable of training of any kind or to any extent. The impairment of tactile sensibility and muscular contractility in idiots is important as interfering with their instruction even in mechanical acts and arts. In 476 examined, the average development of touch stood as 8·52 to 10 ; while in 494 muscular power was as 8·33 to 10. In 90 sensibility was in a state of hyperæsthesia in 4, natural in 14, no information could be obtained in 12, and anaesthesia existed in 60. In cases much less degraded epilepsy in itself offers a serious barrier to the benign influence of education—first, as an interruption to all systematic efforts ; secondly, from the deterioration by which it is generally accompanied ; for it is worthy of remark that idiocy, or the suppression of the faculties, stands in the same relation to epilepsy in the young, that dementia, or the extinction of the faculties, does to epilepsy in those of advanced age ; and that, metaphysically, the states are identical ; and lastly, as inducing irritability, or capriciousness of temper, violent passions and debased appetites. The idiot must not be described as merely without intelligence, but often as an unreasoning animal, actuated by the worst impulses of our nature ; and where epilepsy is added to such a combination the danger that he will become the perpetrator of crime, or the disturber of social or family peace, is greatly increased, and increased in proportion to the removal from the healthy standard. Such a combination is by no means infrequent. Five years ago a census was taken of those of weak mind in Scotland. The tables then drawn up were, confessedly, imperfect, but they contain the most trustworthy information which we possess. Imbeciles and idiots, being classed together, amounted to 2236. Of these, while 43 are described as paralytic, 46 as hemiplegic, 10 as paraplegic, 17 as choreic, not less than 207, or nearly 11 per cent., were epileptic. According to Howe, in 531 cases of idiocy, 310 of which were referred to an adequate cause, 76 were traced to epilepsy.

Except that individuals so affected are generally more degraded, more deformed, more helpless, more irritable and intractable, the nature of their malady does not differ from that of idiots who are free from epilepsy. Yet, notwithstanding these discouraging considerations, it is precisely in members of this class that the benefits of what has erroneously been called training in place of treatment have been most manifest. Two results have followed these experiments—of one undoubted evidence can be obtained, of the other the proof does not amount to more than probability. We are satisfied that signal ameliorations have been effected in the condition of the epileptic idiot ; that new feelings, new habits, have been imparted ; that a certain amount of knowledge and mechanical aptitude have

been communicated. But we are not satisfied that congenital microcephalic idiots have been cured, have been raised to an equality with reliable and responsible men, and embarked upon the world self-guiding, self-governing, self-supporting citizens.

Deeply interested in this branch of our subject, and having observed that a high authority, M. Parchappe, declared that ten individuals had been discharged from Bicêtre recovered from idiocy, I, some years ago, proceeded to France to see and examine these creations of our art. My mission was unsuccessful. I could not trace these convalescents to the loom, the plough, or the vineyard; I could not obtain accurate information as to the amount of capacity and enlightenment attained. But it was not fruitless; for these researches brought to light what may be ranked as a discovery, that, whatever the benefits conferred might be, the triumph had been achieved chiefly in the class of epileptic idiots; that certain of those discharged belonged to this class, and that the steps and rationale of the achievement consisted in the cure, or removal, or mitigation of the epilepsy, and the subsequent evolution, whether spontaneous or artificial matters little, of comparative lucidity and educability. It is unnecessary to insist upon this additional illustration of idiocy being a disease which is to be cured, not merely an embryo faculty to be developed. You can understand why, on finding corroboration of these observations in this country, I have since held the heresy that epileptic idiots are as favorable subjects for training as other idiots, if not more so.

The results of trephining in cases where the disease depends upon fracture, depression, or other injuries of the bones of the cranium, or to the membranes, whether primary or secondary, indirectly confirm these conclusions. When benefit follows the operation, that consists in the removal of the epilepsy, and spontaneously in the restoration of intelligence. I quote a case given by Dr. Hayward in the 'American Journal of Medical Science,' 1838, p. 517:—"After prolonged nervous derangement, continuing through thirteen years, the trephine was employed. A short, delicate, bony projection advanced from the interior of the skull; the dura mater adhered to it, but was separated by a probe without much difficulty. The membrane was quite healthy; instantaneous and complete relief followed to the sense of pressure which the patient had felt. He declared, whilst on the table, that he had not felt so well for thirteen years, and he afterwards wrote to the operator—'The peculiar sense of relief which I expressed on the moment when the operation was over has become a part of my common consciousness.'"<sup>\*\*</sup>

In asylums, when an attempt is made to cure epilepsy, the main object is to mitigate or remove the mental symptoms, and in

\* 'Brit. Med. Journal,' 17th June, 1865; Hull, "Determination of Blood to Head," Eighth Essay, 1842.

instances where even traumatic epilepsy has ceased during the exhibition of iodide of potassium, the result has been that the mental and physical symptoms have been relieved simultaneously.

"There are a certain number of epileptics," writes Falret, "who, notwithstanding the intensity and frequency of their attacks, preserve nevertheless throughout life the integrity of their intellectual powers, and present only slight perturbations of character and intelligence, to which we cannot give the name of insanity."\* But this is begging the whole question. In these "slight perturbations of character and intelligence" I detect infallible evidence of mental unsoundness, of the continuance of that disease which may be aggravated or complicated; may return in the form of delirium or convulsion, and which is here presented under a mitigated but unmistakable form.† It may be fairly urged, further, that when the character and intellect are perturbed it is a gratuitous presumption in an observer of such a disease to determine the precise amount of morbid influence which may be exercised over the emotions and will. The absence of fits may, in an epileptic, be styled health. But it would nearly be as reasonable to declare a patient labouring under ague convalescent in the intermission, as to represent an epileptic sane, and like other men, in the absence of the prominent symptom. However much the minds of epileptics may, in some respects, resemble those of healthy individuals, they differ from all of these, and differ in the same respect. The distinctions are mainly uncertainty of purpose, sudden development of irresistible impulses, and temporary interruption to thought. It is worthy of grave consideration, the analogy of these psychical conditions with the phenomena of the convulsion. It is not a vain conceit to compare the moral instability with the irregular involuntary character of the muscular action, the sudden impulse with the fit, and the temporary unconsciousness with the coma.

Zacchias argued that an epileptic might equitably be dealt with as well upon the third day after a paroxysm; confessedly, the difficulty as to the return of health and responsibility arises as to the interval, and increases in proportion to the length of that interval and the apparent exemption from extravagance or eccentricity which is enjoyed. The same difficulty occurs in the determination of the limits of health and disease in every form of mental affection; but were epileptic derangement admitted as a specific and generally chronic affection, and were it subjected to long and vigilant observation, these impediments would disappear and the ends of justice

\* Falret, 'Archiv. Gén. de Méd.' t. xvii, p. 488.

† Esquirol, t. i, p. 289, says, "When the attacks become rare, although the disease continues, the mind is progressively improved, the character of the patients is ameliorated; they are less irritable, more docile, more sociable; but I have never seen one who did not retain a marked physical and moral susceptibility."

as well as those of science would be secured. The tendency to relapse—for the occurrence of one fit seems to predispose to others—whether the return of the convulsion be periodic or irregular is in itself a morbid element, and indicates a certain change in the structure and laws of the nervous system, over which the will can have no control. You will find in Dr. Laycock's work on 'Nervous Diseases of Females' (p. 314) some most interesting remarks upon the rhythmical or trochaic nervous affections. But the most significant peculiarity in choreaic, as distinguished from epileptic, muscular contractions, is that in the former case the patient can will, but not direct the initiatory or recuperative act, and can to a great extent regulate the rapidity and succession in which such actions are performed. I have seen the rotatory movement of the hands and arms go on for days, with perfect precision and regularity in the intervals. Yet even in certain modifications of epilepsy an emotion, or even the will, has the power of restraining, or rather of postponing, the fit, and of transferring its recurrence from day to night. Marcé estimates that two thirds of choreaics display disturbance of mental faculties, and in the following order:—I. Change in disposition. II. Impaired memory, attention, mobility of ideas. III. Hallucinations. IV. Maniacal delirium.\*

If this tendency to relapse be more easily called into activity in epileptics than in well-constituted men, and, from the very existence of such law of periodicity, they are less able to resist the instigations and impulses which it entails as consequences, it appears incumbent to regard them as belonging to a class which must be judged according to different principles than those applicable to healthy men.

There are, besides, epileptic families. Hereditary transmission has been demonstrated to exist, but in fewer instances than in the other neuroses; and, what is remarkable, epilepsy is more frequently derived from insane than from epileptic progenitors.

Now, in such classes the slightest deviations from the established standard of the courtesies, and decencies, and decorum of life, or from that standard recognised by the patient himself, may be, as theft often is, a premonitory symptom, of which the patient has no true perception nor recollection; and while we would be slow to adduce crime as an evidence of disease, yet where crime is modified by the hereditary or paroxysmal tendencies, where it is of a monstrous, motiveless nature, or where it proceeds from an inexplicable motive, where it is committed suddenly in open day, in the presence of witnesses—without recourse to concealment or flight—there should arise a doubt and an inquiry as to its origin, and as to how far, or whether in whole or in part, its source is tainted by morbid

\* "De l'Etat mental dans la Chorée," "Mém. de l'Académ. Imp., t. xxiv, p. 18.  
Brit. and For. Rev., April, 1862.

as well as by malicious influences, for it may partake of both—an inquiry unnecessary in the case of healthy offenders.

"A vine-dresser, in the neighbourhood of Lyons, was suddenly seized with a fit of shivering. He took up a mattock and killed three of his children, who were near him, in the house. A hundred steps from thence he killed his wife and his last child. Having accomplished all these murders, he went and gave himself up. This man was not intoxicated; he had never previously evinced signs of madness; there was no apparent motive to explain his action.

"M. Bottex, the physician charged with the examination of the vine-dresser, discovered that he had experienced vertigo and giddiness some days before the arrest. Besides this, he was sad, melancholy, and appeared to have had some idea of suicide. Other testimony established that he was much attached to his wife and children.

"The case then appeared most simple, and that transitory madness ought to be admitted without difficulty. But at this stage a witness came forward to reveal a strange proposition which the murderer had held ten months before. He had said that a man who should kill his wife and family would get off with a few months' imprisonment, because the physicians would make him out to be mad. In addition to this he had remarked, since his arrest, that one of his children, having survived its mother some hours, became her heir, and that as he himself was heir to this child his wife's property ought to come to him. The result became questionable, and in the report presented to the magistrates the existence of an access of transitory madness was only mentioned as a simple probability. The murderer was condemned to death, but the punishment was commuted to that of penal servitude for life."\*

Such remissions are not, however, always extended to this class, even in France; but we cannot fail to desire that the plea of "extenuating circumstances" which obtains in that country, and which involves the principle of limited responsibility, and the provision for committing preliminary examinations of specially accused prisoners to scientific experts, were added to our own system of procedure.†

There is one phenomenon which by further observation may be found to be pathognomonic of epileptic insanity, even in long intermissions—and the extreme length of these is revealed by a case known to M. Baillarger, where marriage induced a relapse after eight years' immunity, and by the opinion of Dr. McLean, that infantile epilepsy is lighted up in after-life by malaria, scorbutic,

\* Baillarger, 'Ann. Méd. Psych.', Avril, 1861.

† Georget—Delasiauve, p. 501.

and mercurial cachexia. That phenomenon is anaesthesia. Patients fall, are cut, bruised, are burned, or place their limbs in the fire, mutilate themselves. I had one who castrated himself, with an indifference and callousness and joyousness which demonstrated a numbing, if not an extinction, of sensibility. It is quite explicable that they may be protected from acute suffering by unconsciousness at the time of receiving the injury; although, when it is self-inflicted, this is only intelligible by referring it to the imperfectly conscious states to which allusion has been repeatedly made; but the same exemption from pain continues when lucidity is restored. In many cases, even during the interval, violent impressions are disregarded, and slight impressions do not appear to be felt. Nor is this modification of sensibility in proportion to the severity of the convulsive disease. Colquhoun gives the history of a man who, though retaining mental lucidity, and able to travel from one place to another, was, during the attack, insensible; though pricked, pinched, or struck, he felt nothing. He could not see when his eyes were forced open. He could not smell even the most volatile spirit, nor could he hear the report of a pistol when fired close beside him.\* The passiveness which follows this inaptitude for receiving external stimuli is accompanied by great weakness of the muscular system. All epileptics, except during the paroxysm, are feeble, vacillating in gait, incapable of exertion or labour. There are thus allied the contradiction of titanic force and permanent muscular debility.

This obtuseness, though generally more particularly involving touch, is shared in by all the special senses. The same hebetude affects the mental faculties. Not only is this tardiness in the elaboration of ideas and of ideo-motor volitions, but there is a sluggishness in receiving influences from without that modifies the ties of an epileptic with his fellow-men in a marked and painful manner. I have listened to an answer given to a question addressed to a patient minutes previously, and when, in despair of intercourse, I was about to leave his room.

Without inviting any discussion as to the prescriptive limits of sensation and intellect, it may be held, and has been held, that a blind man is less responsible than a man endowed with vision, because he is cut off from many impressions, many sources of information, as to his relations with surrounding persons and circumstances. A man who is deaf as well as blind is still more restricted in his experience, his knowledge—is shorn of two elements which, in a great majority of cases, are required for the formation of both opinions and principles of action; when these deprivations, although partial, extend to all the inlets of information, and even to

\* 'Isis Revelata,' vol. i, p. 333.

the states of consciousness, or the powers recipient of external impressions, it is necessary to conclude that the difficulty in forming clear and accurate judgments, and of controlling or directing the instincts and motives, must be greatly enhanced. Even the element of time must affect such a question. The lucid, active, conscious existence of an epileptic is much shorter than that of his healthy fellow-men. Eleven hundred fits have been observed during one year, and though without obvious impairment of thought, with obvious abbreviation of the duration and continuity of thought.

A “fitty pauper” is well known in certain parishes. And while some of the ravages of epilepsy as an epidemic occupy a large space in history, it is encountered endemically upon certain highways and byeways, and near the doors of charitable lords of the manor. It is a profession, a source of revenue, an appeal to sympathy. You will suppose that the simulation of epilepsy must be difficult, infrequent, necessitate adjuncts and consequences which would frustrate the object in view. It is, however, a heritage of beggars; and one detected in a well-got-up fit confessed that he had been taught the trick by his father, who had carefully studied the symptoms in a book, and had practised the art successfully for twenty-eight years. A villager having entered a military hospital in order to be treated for a pretended epilepsy, had his attack whenever the medical officers paid their visits, and when they were a few paces from his bed. He shook, cried, writhed, and, doubtless, congratulated himself upon the secret of his success. The chief surgeon addressed several of his colleagues who accompanied him:—“Good, gentlemen; I have sought for this opportunity for a long time. You know that Hippocrates has said that eunuchs are not subject to epilepsy. It is accordingly necessary to castrate this patient, as in removing the testicles we shall probably cure the disease. Bring me the bistouries.” At these words the patient leaped from his bed, asked pardon, and protested that he would rather be an epileptic than a eunuch.\* The stratagem is common among sailors who prefer deck work to going aloft. During severe conscription times, according to Laurent and Percy, 20 in 100 recruits laboured under epilepsy. Another authority states, but is perhaps speaking of a time of peace, that of 7000 individuals examined in the space of four years, 28 were rejected upon the same ground. In France the proportion in the general population is 1 in 1000.† According to Dr. McLean, in the last statistical sanitary report of the army, 107 epileptics were invalidated of 1993 soldiers admitted to Fort Pitt.

The introduction of soap into the mouth in order to afford the spumous saliva, the imitation of the cry and of the contortions of

\* Legrand de Saulle, p. 442, op. cit.

† Legrand de Saulle, p. 441, op. cit.

the frame, may appear vulgar and commonplace, and many physicians have believed that no ingenuity, no cunning, could deceive *their* power of diagnosis. Esquirol—whose name I never pronounce without feelings of love and respect—during one of those conferences which he encouraged while resting during his long clinique, and which rise vividly before me as the happiest moments of my student life—boasted in this fashion. One of the pupils shortly afterwards suddenly fell convulsed upon the floor, presenting all the features of severe epilepsy. Esquirol, watching with deep anxiety, turned to those around, saying, “Ah, poor boy, he is an epileptic.” Up leaped the boy, crying exultingly, “You see, my master, that we *can* simulate an attack of epilepsy.” That simulator was Calmeil, the first and still the greatest authority upon general paralysis, and now physician of Charenton, where the deceit was practised, and the narrative is given by Legrand de Saulle, p. 358. The disease of malingering—for the tendency to deceive is in many instances of morbid origin—is common in asylums, and the simulation of epilepsy is one of its favorite forms. This very instructive consequence of such practices has been noticed—the *pretended* has merged into a *real* attack, and, as in parallel instances in hysteria and in chorea, muscular acts which have been willed and co-ordinated for a specific purpose pass beyond the dominion of volition, and are performed without a purpose, and in conformity to the known course of nervous periodic affections. The locomotive is started, but cannot be directed nor restrained. The bearing of this upon automatic acts is obvious.

A grand psychological parallel has recently been drawn between Julius Cæsar and Napoleon I, and that by imperial hands. The character, the aims, of these regenerators of the social structure, separated by the interval of 2000 years, have been depicted as identical. The comparison will prove more striking, and will not be faithful nor complete until it be told that both were *epileptics*. It has been a favorite but most unfortunate and fallacious mode of opposing the proposition which we are now investigating, to enumerate many of the great and the wise and powerful of the earth, who have ruled the opinions and wills and fortunes of vast numbers of their fellow-men, and who appeared to control the course of human progress, as epileptics. It would be as logical to adduce the occasional connection of genius and crime as a proof that the mental light was undimmed by the vice. It may appear a paradox to say that the world is none the worse of a little enthusiasm and extravagance and excitement, to stimulate the dull and sluggish nature of uncivilised or half-civilised man, and that we owe something to the very errors and delusions of our ancestors. The “dreams at the dawn of philosophy” have sometimes awakened into the realities of demonstrable truth, and the reveries of a crackbrained fanatic are

now the creed of millions, and destined, according to the prediction of a living anthropologist, to be the destroyers of paganism and idolatry, the civilisers of the African race. I have called the catalogue of illustrious epileptics an unfortunate and fallacious scheme, because the selections are of men of unhealthy nervous system, and because of their inner life we can now obtain no clear glimpse through the darkness or hazy glory of antiquity, lofty station, artificial society, &c. But let us look at them, or a few of them, by the lights we possess. Of the *first* above alluded to, apart from other interruptions to the sustained exercise of thought, we read that in the very senate he displayed courtesy, and then offered his bared throat to any one who wished to become a tyrannicide. He then pleaded his malady in palliation of his rudeness, saying—mark the confession—“that those who are attacked are incapable of speaking when standing in public, that they experience shocks throughout the frame, that they feel confusion and a complete loss of consciousness.” Of the *second*, it is recorded that hyperæsthesia of the scalp led to the *chapeau du petit caporal* so intimately connected with our ideas of this personage; that he was frightfully agitated by absurd antipathies towards cats, attacking them or their simulacra with the sword that blazed at Marengo and Austerlitz; that he laboured under partial chorea; that, like Sir Robert Peel, he was involuntarily plunged in profound abstraction, during which external objects faded from before him, and that he saw, if nothing more, certainly a personification of destiny, perhaps of his presiding genius, perhaps of that star that he believed guided him on his way.

Conceive the golden-mouthed apostle Bossuet a victim to the *petit mal*—terrified by the prospect of lithotomy, losing language, shorn of the glorious gifts which even now gives him a prominent place among the orators and defenders of the Christian faith; and think of him as haunted, persecuted, tyrannised over by an ever-recurring ode of Horace, which excluded every other thought and feeling.

Molière has been added to this group; suffice it to say that he was incapacitated for work or thought, for that was his work, for fifteen days after every fit; that he lived on milk; drew his own portrait in writing ‘*Le Malade Imaginaire*;’ had a fit while acting the part, which, with consummate address, he concealed under a laugh; that he was estranged from his wife, chose an old woman as the critic of his plays, and was denied Christian burial as much on the ground of his eccentricities as his infidelity.

Newton’s glimpse of “cycle in epicycle rolled” ended in epilepsy and dementia. The “tic nerveu,” and perhaps the opiomania, of Madame de Stael ended in delirium. The delicately strung system of Pascal is a sort of lay figure on which to study the most rare and mysterious neuroses. He lived under incessant attacks of *petit mal*,

and died convulsed. He wrote the bitterest satire and the most generous and genial dissertations on ethics. He was a mathematician, philosopher, moralist; but he believed in charms and amulets, and at all times, however occupied, there was an ever-yawning gulf beside him, a *gulf* into which he could not divest himself of the apprehension that he might be precipitated.

Many of those who do not impute imposture to Mahomet detect in his trances epileptic seizures, in his visions and revelations the false impressions and delusions of alienation, and in his gloom and retirement to Mecca the depression sometimes following the attack. It is recorded that, with the intention of concealing the real nature of his convulsions from his first wife, Khadijah, he represented them as the natural blinding and fainting of the spirit on the close approach of the Angel Gabriel. It would appear that he failed in this, as she is said to have regarded him as a madman deceived by the artifices of a demon, while the inhabitants of Mecca held him to be possessed.

It is interesting that, despite the doubts of the learned and judicial mind, popular opinion has ever assimilated the falling sickness with God's wrath and with mental infirmity. When it is wished to hint a doubt or hesitate dislike, to impugn perspicacity and truthfulness, the controversialist or calumniator, as the case may be, suggests that his victim is an epileptic. The arch-sceptic of modern days says, in this spirit, of the Author of Salvation, that he had vertigo, &c.

It has been insinuated that it is chiefly those who are familiar with epileptics in asylums that are disposed to regard all persons similarly affected as of unsound mind, and to exonerate them from the rigours of the penal law. This may be partly correct; but it is correct, not because physicians so situate are sentimentally humane or illogical in arguing from a narrow and exceptional premise, but because they enjoy constant and long-continued opportunities for discriminating observation which are inaccessible to all others.

No physician of ordinary practice, although he may never have been in an asylum—no common observer who has kept his eyes open, although he never saw a case of madness—but must be brought roughly into contact with men who, after an attack of epileptic convolution, undergo alterations in manner, commit extravagances, or present peculiarities of character hitherto unnoticed, and of others where such alterations and peculiarities are inferred and traced back to such a source. But we are not always left to infer these states from conduct or from a theory of the disease; we possess the experience of many sufferers, who, although partially incapacitated from being witnesses by their condition, may be trusted as faithful exponents when their confessions coincide with such references. We have before us the spontaneous confessions and most harrowing analyses of themselves by men moving in society and exercising

influence over it, and trusted and honoured by its members for sound judgment and sagacity ; who were conscious of an unhealthy inner life, who did not trust themselves, who were haunted, not only by the ever-present shadow of coming insanity or dotage, for this is a frequent element of genuine and confirmed epilepsy, but by the suspicion and dread that what they *then* did was tainted by some lurking or latent vice, was perverted or wrong, but that they failed, from their very infirmity, to detect the nature or amount of the error. Many of the epileptic insane pass their lives in a moody, morose terror, and depreciation of the future, and in seeking sympathy for their misfortune ; but the class to which our present observations are confined describe a revolution in their nature ; they deplore the decay of lofty principles, the extinction of passions or emotions, as if by premature old age, and a callousness and estrangement from former friends and from favorite pursuits. They speak as if their spirit was involved in cloud, and darkness, and vagueness ; they recoil from loathsome instincts, suggestions, and words, which rise up unbidden even when forbidden and resisted ; they seem to lose hold of self and of the command of self, of the past, of personal identity. They feel as if they were only a part, and an unworthy part, of what they once were. And yet they assist at this moral dissection of their spiritual being, and retain such power and strength of purpose as for seasons, and especially when roused or distracted by the crush and crowd and noise of the world, to be enabled to set aside and forget these impressions, and to act independently of their existence.

We do not aver that one, or even a group, of such phenomena should place a man in the same relation as a raving, riotous maniac ; but they are of such a character as to render him less capable of regulating his conduct, less capable to resist the all but omnipotent urgency of external circumstances ; and, if not involving only partial responsibility, certainly demanding consideration and allowance from friends, associates, and public tribunals.

The sudden and inexplicable development of a proclivity to drinking, lust, and crime, in such cases, is an additional proof of the vast and morbid changes entailed upon the mental economy. In a very large proportion of the cases of epileptic insanity detailed by systematic writers some frightful catastrophe has first drawn attention to the mental condition, and led to sequestration. But violation of the law is found associated with epilepsy where no alienation is suspected. It appears from the 'Report of the General Prison, Perth,' for 1864, p. 58, that the number of epileptic prisoners for the last decennial period was 75, or 7·5 to a population of about 600.\* Dr. Thomson has kindly supplied the additional information that there

\* In the annual report of Broadmoor there are 21 subject to convulsive diseases in 323, or 1·15 per cent.

are now in confinement 10 epileptics, of whom 3 are insane and 2 are imbecile, and says, "The large proportion of epileptics are more or less weak-minded, and should have a special hospital. I found my opinions chiefly upon the fact that epileptics are continually returning to prison, and, as they are weak-minded and cannot earn an honest livelihood, they are entitled to merciful consideration."

In the preceding observations I have said that epilepsy may be cured, or may cease spontaneously. You will not, consequently, suppose that I advocate so sweeping a proposition as that every one who has at any time been convulsed is permanently and irretrievably of unsound mind. My purpose has been to represent epilepsy as one of a group of symptoms which, for a few seconds or for a lifetime, interfere with the operation of the ordinary laws of mind, and which should be regarded, especially in their psychical aspect—the loss or impairment of consciousness—as constituting a specific disease; and this purpose would be attained even were it admitted, as certain English observers hold, that thirty-eight per cent. of epileptics were mentally, in the absence of the fit, in a state of health. An attempt has been made to show that in infancy epilepsy is the cause or consequence of idiocy, interferes with mental health, and involves that limited consciousness which separates the sufferer from his fellow-men. It has appeared from our inquiries that various forms of mental derangement take the place of the convulsive attack; that the momentary giddiness is as much a departure from sanity, and may entail as formidable moral perversions, as the convulsive fury; that a mere delusion may be a substitute for the ordinary attack; that an individual acting and speaking naturally may be in an abnormal condition which forms no part of his ordinary consciousness, and of which there remains not a trace in memory; that many of the acts, whether reasonable or extravagant, are as much automatic and involuntary as the muscular contractions; that neither of the wildest fury prompting to frightful atrocities nor of the passing caprice or irritability, is there a clear and coherent perception; that even the most mitigated form of such symptoms entail loss of sensibility, of muscular power, of moral sense, and moral control. I have refrained from taking any advantage of the evidence afforded by the symptoms of the mania of epilepsy, properly so called, as, except in their intensity, they do not differ materially from those of ordinary mania; nor by the epidemic forms of the disease, which, without any attempt to pun, have convulsed communities, all of which (even the recent outbreak at Morzine\*) go to show that epilepsy, and its attendant mental perversion, is propagable, as well as hysteria, by imitation; nor by the

\* Kuhn, 'Ann. Méd.-Psychol.', Avril et Juillet, 1865.

pathological appearances observed in those who have died of the disease. I have confined myself to the ordinary, characteristic mental life of epileptics. If I have succeeded, you will be enabled to take a wider and broader view of the relations of this large class of unhealthy organizations moving amongst us ; you will come to the conclusion that epilepsy is no bodily disease, to be relieved by a pill or a potion ; but a mental blight poisoning the purest and kindest natures, darkening the brightest intellects, and prostrating the best and noblest resolves before secret, sometimes slight, irregularities of the nervous system, which constrain, compel ; and over which neither reason nor religion can exercise any influence.

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## CLINICAL CASES.

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*The Bromides of Potassium, Cadmium, and Ammonium, in the Treatment of Insanity.* By THOMAS B. BELGRAVE, M.D. Edin., Assistant Medical Officer, Lincolnshire County Asylum.

(Read at the Annual Meeting of the Medico-Psychological Association, held at the Royal College of Physicians, July 13th, 1865.)

THE following experiments were initiated more particularly with a view to ascertain the therapeutic value of two of these agents in the treatment of "general paralysis;" and though yielding no evidence of our ability to avert the ordinary termination of this malady, they reveal the possibility of controlling some of its more serious occasional manifestations, as also similar symptoms in other forms of mental disease.

Fourteen cases of "general paralysis" were taken, none, however, being in a very advanced stage.

The bromide of potassium was administered in doses of five grains three times a day.

In Cases 1 to 5 (males) the only effects observed were a slight retardation and enfeeblement of the pulse, with some amount of general depression, as evinced by increased lassitude and indisposition to stir or talk. Cases 6 to 11 (females) exhibited similar results ; two of these patients, however, emaciated rather rapidly, and one, hitherto remarkable for hilarity and cheerfulness, became fretful and low-spirited.

Case 12 was that of a stout man, who had shown clear symptoms of general paralysis during nine years, but which remaining stationary the greater part of that time, it had been possible to employ him uninterruptedly on the asylum farm. The influence of the drug on him was very conspicuous; in four weeks he had become depressed in mind, and much thinner and weaker; these effects becoming more marked, the medicine was discontinued, when he rapidly regained his former embonpoint and general condition.

Case 13 was that of a man who was in a state of almost constant excitement, walking rapidly about the airing-courts and ward, swearing and cursing in a very loud voice, frequently striking at imaginary objects, and occasionally arriving at a pitch of great fury. Opiates aggravated his condition, and hyoscyamus and the other remedies tried proved powerless to calm him. He was usually as noisy during the night as in the day.

Having taken the bromide of potassium about ten days, a marked diminution in the more painful symptoms was observed; he had obviously become calmer, he addressed his imaginary enemies in a lower tone of voice, his bursts of passion were less frequent, and he ultimately became quiet; nor has the paresis since advanced in any great degree.

It is possible that the gradual accession of calmness in this case was the natural sequel to the preceding excitement, but the appearance of the case conveyed the impression of an early fatal termination from exhaustion.

Case 14.—A female, in a more advanced stage of the disease than any of the preceding, subject to delusions sometimes of a cheerful, at others of a painful, character. When under the influence of the latter, she is exceedingly fretful and noisy, often shouting and crying, seizing everything movable within reach, and when resisted becomes exceedingly violent, her excitement being followed by very great depression.

Having taken five or six doses of the bromide of ammonium, she became calm, and continued so an unprecedentedly long period. Her excitement still recurs now and then, but is invariably subdued by three or four doses, without the induction of subsequent depression, such as characterised the majority of those cases in which the bromide of potassium had been administered.

The next eleven are cases of epileptics, specially selected in consequence of their extreme irritability and proneness to violence.

The results are probably inconclusive with reference to the power of these drugs to permanently diminish either the number or the severity of the fits, but afford important evidence of their influence in allaying those manifestations of the disease which so often render the unhappy subjects of it just objects of dread.

Case 15 may be viewed as typical of the class for which the

bromides are singularly suitable, exerting a power as evident and more certain than obtains with many acknowledged remedies in our art. It is that of a remarkably powerful, agile, muscular man, aged twenty-seven, of ferocious aspect and great cunning, always requiring much tact and forbearance on the part of his attendants, apt to strike violently on the slightest real or supposed provocation, and occasionally subject to indescribable paroxysms of excitement, in which his craving and delight appear to be to do bodily harm to his fellow-creatures. His worst periods of fury occur shortly before a fit, but sometimes do not subside until he has had several. They are always of a very severe character. He has been an inmate of an asylum about ten years. In consequence of his frequently manifested disposition to fly at anybody who may be near him, he has been encouraged to walk in a path in the airing-court on a lower level.

The course of bromide of potassium was commenced after a period of excitement lasting several days, during which he ran about his room, climbing the walls in the most remarkable manner, champing his teeth, barking, and uttering cries unlike anything human. When visited, four powerful attendants required to exert all their strength and agility to escape being bitten, kicked, or otherwise hurt.

The medicine was administered in doses of ten grains three times a day. During the first fortnight or three weeks his temper was not improved by the treatment; on the contrary, increased vigilance and care became necessary; the fits were *suppressed*, and his general appearance was altered.

About a month after having taken the bromide, the fits returned, though with less than their former frequency, and he presented very obvious signs of an alteration in what may be termed his emotional condition.

He rarely complained of anything, and appeared comparatively contented, frequently engaged in quiet conversation with his companions, and now and then on frosty mornings he would run and dance about the garden, without losing the power to check himself when necessary, or inspiring any fear among those present.

The drug was discontinued in two months, and its sedative effects have been of a somewhat permanent character, as during the last four months he has enjoyed an immunity from uncontrollable excitement. He continues, however, occasionally to exhibit indications which were formerly viewed as invariable precursors of severe epileptic irritation, but these speedily disappear after a few doses of the bromide, and, indeed, he is no longer a source of anxiety.

The treatment has been attended with the additional advantage of having cured him of his propensity to masturbation, and has altered the character of the secretion from the skin, which has lost its former intense odour.

Case 16.—This patient, a powerful man, aged thirty-one, resembled the preceding one in bodily condition and appearance, but was more impulsive, less cunning and active, and in a more advanced state of dementia.

It had long been necessary to exercise the greatest care and circumspection in managing him, in consequence of the suddenness and exceeding force of his blows. On one occasion, without increased excitement having been previously detected, he struck his fist through a pane of plate glass nearly half an inch thick, sustaining but a slight abrasion from the skin of the knuckles.

So irritable was he generally that either speaking or looking at him would arouse dangerous excitement; at first, showing itself by laughter, jumping, and other evidences of delight, or by approaching his interrogator with a savage aspect and in a significant attitude.

The bromide of potassium in doses of ten grains was prescribed, and during the first three weeks of its administration the patient was more confused, had a more ferocious expression, never answered a question but with an oath and in the most savage conceivable manner. During this time he was comparatively free from fits, but when they returned he became very much better in mind and body, being able to converse calmly and even rationally, never appearing excited or angry; and on one occasion, when a fellow-patient struck him in the face, he did not even return the blow, but reported the circumstance to the attendant. He is now thinner, though not addicted to masturbation. The remedy has evidently exerted a powerful influence in allaying his chronic state of erythema; it is, however, still apt to manifest itself, but usually yields to a few doses of the bromide.

Case 17.—A thin, strumous young man, with extensive caries of the bones of one leg, several years the subject of epileptic mania.

At intervals of two or three weeks he became irritable, was constantly in motion, and swearing, nagging, complaining, teasing his fellow-patients, and was quite incapable of being appeased by any moral or material means.

The bromide of ammonium was prescribed in doses of ten grains three times a day. Its effects have been very gratifying; without losing flesh, or acquiring a more unhealthy complexion, he is now less irritable, and gives no annoyance.

Cases 18 to 25 were ordinary instances of epileptic mania. They have all derived more or less benefit from a month's course of one or other bromide, the good effects continuing to the present day, two months after the treatment.

Case 26.—A young and powerful woman, the subject of epileptic mania, usually extremely perverse and irritable, subject to frequent paroxysms of violence, sometimes of incredible intensity, and which

would break out when she was alone, and without the slightest obvious cause.

Took the bromide of potassium in doses of ten grains. During the first three weeks, instead of having about three fits daily, she had scarcely any, but appeared worse in her general health. Her fits returned gradually, and since then she has been surprisingly industrious, docile, and amiable.

*Case 27.*—A male, age about fifty, stout and strong. Is much demented, and insusceptible to moral influence. Is constantly walking about, swearing and ejaculating in a loud voice and excited manner.

Was much calmed after a week's course of the bromide of potassium; he continues to walk about incessantly, though less rapidly, and mutters in a low tone.

His inconvenient excitement has several times recurred, but has always yielded to the treatment in a few days, no injuriously depressing effects following.

*Case 28.*—Chronic mania; a powerful young woman. Has been insane several years, but during the last few months has become idle, perverse, passionate, destructive, and so noisy as to be heard at a considerable distance from the asylum. Is becoming thinner, and shows signs of commencing exhaustion.

The bromide of potassium was prescribed in doses of ten grains three times a day, and in about three weeks there was a marked subsidence of the excitement, the patient talking in an ordinary tone of voice and more rationally. A few weeks after the discontinuance of the medicine her agitation returned; she ran about the airing-court, waving her bonnet, shouting, and misconducting herself in her former disorderly manner. This condition became more distressing, and her speech more incoherent, when recourse was again had to the bromide, with the effect of inducing in three days a state of comparative composure. The medicine was continued another month, and the patient has been quiet, more orderly, and in an improved state of mind and body.

*Case 29.*—*Recurrent mania*; a male, aged forty-nine. Has been subject to occasional severe, though short, paroxysms of mania during the last twenty-five years. They have, as far as can be ascertained, always been abrupt in their origin and termination. When suffering from them he is excessively noisy, violent, destructive, and abominably dirty. During his lucid intervals, ordinarily of two or three months' duration, he is exceedingly well behaved, industrious, and useful.

He took the usual dose of the bromide of potassium, with the singular effect of reducing the severity, while it protracted the duration, of the attack.

It induced in this case an unprecedented condition of mind;

though troublesome and fidgety, he was supportable, but appeared much confused and demented, and remained in this condition nearly four months, whereas the ordinary duration of his paroxysms was ten days or a fortnight.

Case 30.—A male, aged thirty-four; a strumous person, with evidence of pulmonary tuberculosis; the subject of chronic mania; quite incapable of appreciating any moral consideration; is incessantly running about, hopping, dancing, bawling, shouting, and singing.

After having taken the bromide of potassium a few days, he became more orderly and quiet than he had been during the two previous years, but did not look so well, and had apparently lost flesh. The medicine was at once discontinued, and he soon regained his former condition of bodily health, and during three months he remained quiet. His excitement has recurred once since, but speedily succumbed to small doses of the bromide of ammonium; and on this occasion his bodily health was not appreciably affected. In consequence of the phthisical tendency of this patient, the case is recorded as illustrative of the power, rather than the suitability, of the drug (the bromide of potassium) in this particular instance.

Case 31.—A female, aged twenty-seven, the subject of chronic mania. Has, during the last year, gradually become more excitable and violent, and from her occasional persistency in attempting to attack the same person she has required more than ordinary care in management.

A course of bromide of potassium had the effect of calming her, and she has since been industrious and amiable, and in good bodily health.

Before this special treatment she had symptoms of ovarian irritation, and her excitement was in some measure due to this condition.

Case 32.—A female, aged forty-five, the subject of sub-acute mania. Is exceedingly giddy, and unable to stand or sit quietly a few seconds together; her eyes have a rolling motion painful to witness, the sclerotics are much injected, the face flushed, the head hot, the pupils contracted, bowels habitually sluggish, the cata-menia regular. Talks at times coherently, at others not so, always rapidly and in a peculiar spasmodic manner. Appears to be conscious of her insanity; is extremely restless and sleepless, and very destructive to clothing; complains much of intense pain in the head.

In the medical treatment of this case purgatives and diuretics were freely administered, cold was applied to the head and upper part of the spine, and counter-irritation was also had recourse to. The result of these measures was to slightly alleviate the pain in the head, but not to induce repose during either night or day.

Morphia was tried, but, as was anticipated, it aggravated her sufferings; hyoscyamus, in full doses, gave some relief.

The bromide of potassium, in doses of ten grains, produced a decided and very beneficial effect, diminishing all the signs of congestion within the head, affording complete freedom from pain, inducing sleep, and restoring her natural cheerfulness.

Case 33.—An obstinate and severe case of melancholia in a female of middle age, characterised by incessant attempts at self-destruction.

Half grain doses of the hydrochlorate of morphia were given, and had an evident and beneficial effect. In the course of time increased doses of the narcotic were indicated, but, to avoid them, a trial was made of the bromide of potassium, at first alone, but later in combination with the solution of morphia. The results were singular and important; the patient appeared to be entirely free from the influence of the morphia, and was worse than she had ever been; the dose of the hydrochlorate was then increased to one grain, but with the same negative result; the pupils were dilated, the patient was restless beyond expression, and continually praying to be destroyed. The bromide was then discontinued, but the morphia, in grain doses, was given as frequently as before. In about three days it was observed that she was coming under the influence of the narcotic, and under these large doses she has since had a partial truce to her sufferings.

In another male patient, an epileptic, who is subject to occasional attacks strangely resembling "delirium tremens," and who is invariably benefited by opium, was on the last occasion not so, in consequence of having taken the bromide of potassium during several preceding days. About three days after this had been discontinued he again became susceptible to the influence of opium, and regained his ordinary condition. These two cases tend to show that the physiological action of bromide of potassium is the opposite of that of opium, and this view is in a measure confirmed by the beneficial effects of the bromide in Case 32, one which exhibited every sign of congestion of the brain, and was clearly, though not unexpectedly, aggravated by morphia.

The bromide of ammonium is now being administered to twelve other patients, all subject to more or less painful and dangerous excitement; and in ten of these a sedative influence is being evidently exerted. The action of this drug differs from that of the bromide of potassium, in being less rapid and powerful, producing no depression nor causing any diminution in weight. Of the two drugs, it is the more suitable in cases where there is emaciation or debility. The bromide of potassium exerts a sedative action on the organic functions of the brain, and probably indirectly on the intellectual functions; and if Schroeder van der Kolk's theory of epilepsy contains

any truth, viz. that through a disturbed state of polarity of the spinal cord an abnormal accumulation of nervous force takes place, analogous to the convection of electricity in the Leyden jar, we must attribute to these drugs an action on the spinal cord.

Various observers have reported differently concerning the action of the bromides in epilepsy.

These experiments tend to show that they exert a marked temporary power in diminishing the number of fits ; but inasmuch as the mental excitement is in consequence increased, this property detracts from their value as therapeutic agents in the treatment of this disease when complicated with insanity.

Very probably they also exert a limited power in permanently reducing the number of fits.

The following table supports this view ; it refers to the number of fits seven patients had during May, the month in which they took the bromide, and also the previous and following months. During the first *fortnight* in May, however, five of them were comparatively free from fits.

| CASE. | APRIL. | MAY. | JUNE. |
|-------|--------|------|-------|
| A.    | 39     | 32   | 43    |
| B.    | 41     | 38   | 46    |
| C.    | 13     | 9    | 11    |
| D.    | 6      | 1    | 6     |
| E.    | 7      | 9    | 10    |
| F.    | 9      | 4    | 9     |
| G.    | 6      | 3    | 4     |

Of six patients who were weighed before and after having taken the bromide of ammonium a month, it was found that two had lost 1 lb., and one 3 lbs. ; the others had gained, one 4 lbs., and two each  $\frac{1}{2}$  lb. In two of those who had lost weight the result could be accounted for by an alteration in their diet, rendered necessary by their obesity.

The bromide of cadmium was tried in eleven cases of mania, with a view to relieve severe temporary excitement.

A single dose of one grain was found to exert a very rapid and powerful effect, causing abundant vomiting, a brisk action of the bowels, diminution in the force of the pulse, and the induction of a state of mental quietude, in two cases bordering on depression, which, however, passed off in a few hours.

#### *Summary of the results of these experiments.*

The bromide of potassium is antiphlogistic, and a sedative to the cerebro-spinal functions. It subdues the force of the pulse ; induces loss of flesh and debility ; allays nervous irritability and mental excitement ; exerts a powerful temporary, but slight permanent control, over the number of fits.

It diminishes congestion within the brain and spinal cord. It is physiologically antagonistic to opium.

It is an anaphrodisiac, being equally useful, as such, in both sexes.

It exerts a deterrent action on the excito-nutritive and excito-secretory functions.

That its action, when once established, continues an uncertain but considerable time, and may be kept up by short renewals.

The bromide of ammonium resembles the bromide of potassium in its action on the nervous system, but is less powerful; and it does not induce emaciation nor severe general depression.

The bromide of cadmium is probably an irritant to the mucous membrane of the alimentary canal; its brief but severe calmative effect being principally the depression following the action of a powerful emetic and purgative, and not the result of a sedative influence on the nervous system.

The rapidity with which the patients recovered from the depression would indicate this view, and doubtless the more persistent benefit they derived was attributable to the free evacuations induced.

The action of this drug resembles that of tartar emetic or sulphate of zinc, but is more certain, rapid, and powerful in its effect; having treble the power of the former, and twelve times that of the latter.

It is exceedingly useful in severe exacerbations of mania.

The bromides of potassium and ammonium supply a want long desiderated, in the treatment of a numerous and dangerous class of chronic lunatics.

## PART II.--REVIEWS.

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1. *Nineteenth Report of the Commissioners in Lunacy to the Lord Chancellor.* Ordered by the House of Commons to be printed 20th June, 1865, pp. 96.
2. *Seventh Annual Report of the General Board of Commissioners in Lunacy for Scotland.* Presented to both Houses of Parliament, by command of her Majesty. Edinburgh, 1865, pp. 263.

WE proceed to present an analysis of these official Yearly Reports on the Condition of the Insane.

### I. THE EIGHTEENTH REPORT OF THE COMMISSIONERS IN LUNACY TO THE LORD CHANCELLOR.

On the 1st of January, 1865, the number of lunatics confined in the asylums of England and Wales was 29,425. On the 1st of January, 1864, the number was 28,385; the increase on the year has thus been 1040. This increase has been chiefly in the county asylums; in the provincial licensed houses there is a decrease of ten on the mean population resident during the year 1864.

The following table shows the increase of patients in the asylums of England and Wales during the decennium 1854-64 (inclusive) :

| Asylums of England and Wales.                   | On the 1st January, 1855. |          |        | On the 1st January, 1865. |          |        | Total Increase during the decennium 1854-64 (inclusive). |
|---|---------------------------|----------|--------|---------------------------|----------|--------|--|
|   | Males.                    | Females. | Total. | Males.                    | Females. | Total. |  |
| County and Borough Asylums . .                  | 6,140                     | 7,439    | 13,579 | 10,192                    | 12,092   | 22,284 | 8,705  |
| Lunatic Hospitals . .                           | 872                       | 817      | 1,689  | 1,116                     | 1,061    | 2,177  | 488  |
| Metropolitan Licensed Houses . .                | 1,090                     | 1,433    | 2,523  | 1,073                     | 1,283    | 2,356  | Decrease of 167  |
| Provincial Licensed Houses . .                  | 1,392                     | 1,196    | 2,588  | 1,217                     | 906      | 2,123  | Decrease of 465  |
| Naval, Military, and State Criminal Asylums . . | 114                       |          | 114    | 390                       | 95       | 485    | 371  |
| Totals . .                                      | 9,608                     | 10,885   | 20,493 | 13,988                    | 15,437   | 29,425 | 8,932  |

There has thus, during the decennium 1854-64 (inclusive), been a decrease, notwithstanding the increase of the population at large, in the mean population in the metropolitan licensed houses of 167, and in the provincial licensed houses of 465. On the other hand, there has been an increase in the numbers resident in the county and borough asylums of 8,705, and in the lunatic hospitals (including the criminal asylum) of 859.

Various alterations and additions have been in progress during the year 1864 in the several county asylums, to meet this great and continuing increased demand on their space. At the Bucks Asylum fifty beds have been added on the female side, at a cost of £57 each. At the Cambridge Asylum two detached wards are in course of construction to contain twenty patients each. At the Cumberland and Westmoreland Asylum two detached blocks are being erected, each to contain 105 patients, at a cost of £85 per bed. At the Cornwall Asylum a building for fifty-two private patients has been approved, at a cost of £85 per bed. At the Durham Asylum two additional cottages for attendants, with apartments between them to accommodate ten convalescent patients, have been constructed in the past year. At Colney Hatch a detached hospital ward, capable of containing fifteen patients of each sex, has been built at £100 per bed. It is already occupied by convalescent female patients, the female wards being quite full. An additional ward has been added to the female side of the Warwick Asylum; a new detached residence for the medical superintendent is being erected at the Kent Asylum, as also a new water tower, at a cost of £1000. A large range of stores has been built at a cost of £1000 at the Hants, and £750 have been spent on the enlargement of the recreation hall at the Chester Asylum. The Commissioners have farther been in communication alike with the visitors of the Joint Asylum at Abergavenny, and of the Salop and Montgomery, regarding plans for the enlargement of both these asylums. The Somerset Asylum is also being enlarged.

This tendency to enlarge the existing county asylums increases. The old idea of fifteen years ago, of 300 to 400 patients as the *maximum* number which one superintendent could control, is gradually being superseded by the views, which we have previously advocated in these pages,\* of the wisdom and economy of enlarging the county asylums—which now average 500 inmates—to 1000 beds.

Three new county asylums have also been opened during the period embraced in this Report of the Commissioners, viz., the New Dorset, the Glamorganshire, and the additional asylum for the county of Stafford. The old Dorset Asylum has been fitted

\* 'Journal of Mental Science,' January, 1865. "On the Several Means of Providing for the Yearly Increase of Pauper Lunatics."

up as a middle class asylum, and it is greatly to the credit of the Dorsetshire Justices that they have thus taken the initiative in supplying the present urgent want of public asylum accommodation for the middle classes.

However justly we may pride ourselves on our advance on continental nations in our treatment of the insane poor, we have a valuable lesson to learn from them in this question of public asylum provision for all classes of society. In the public asylums of Germany and France there are usually three classes, and the profits derived from the boarders are paid into a building fund, from which all the repairs and enlargements of the asylums—in England charged on the county rate—are defrayed. We entertain no manner of doubt that a similar success would attend the experiment in England, and we rejoice to see that a beginning herein has been made by the visitors of the Dorset Asylum.

The Commissioners record the opening of the male department of the Criminal Asylum at Broadmoor. The female wing opened in 1863 is already full, and an immediate addition to this division is suggested. The arrangements at Broadmoor they report to have been characterised by much energy and ability on the part of the medical superintendent.

The Commissioners report most favorably of the new asylum for Glamorganshire, opened under the able superintendence of Dr. Yellowlees.

The additional asylum for the county of Stafford at Burntwood, near Lichfield, of which Dr. Davis is the medical superintendent, is to remain under the same committee of visitors as the original asylum. It is thought that they will thus be better able to promote the exchange of patients, the intended principle being that this establishment shall, as a rule, be used for the convalescent, quiet, and working classes. Generally, the Commissioners report very favorably of the construction and arrangements of the building, which will, when completed, be found suitable and convenient.

It appears, further, probable that a separate asylum will be built for the County of Berks, which is now united to Oxford. "We have" say the Commissioners "satisfaction in stating that all idea of enlarging the asylum at Littlemore has been given up, and that the only question now to be decided is, whether the new asylum to be erected in Berkshire shall be for the united counties or for Berkshire alone, the latter being, in our opinion, on every account the preferable arrangement."

This opinion of the Commissioners we fully endorse. Committees of visitors composed of justices of several counties and boroughs never act with that freedom and unanimity on which so much of their success in the management of the asylum depends.

In addition to this active extension and enlargement of the

county asylums, the Commissioners further report that some of the new borough asylums are in a state of forwardness and progress. The Birmingham Borough Asylum, which has always borne the highest reputation, has recently been enlarged by the addition of a new dormitory and day-room on the female side, and plans for similar improvements on the male side have received the approval of the Secretary of State. The asylum for the city of London, at Dartford, will shortly be opened, and a site for the borough of Newcastle-on-Tyne has been purchased, and plans are in preparation. The justices of that borough have secured the services of Dr. Crichton Brown as medical superintendent. The boroughs of Derby, Leicester, Maidstone, Plymouth, and Norwich, are all reported as being in communication with the Commissioners on this question of providing accommodation for their insane poor. It cannot be said that nineteen years of existence has lessened the zeal or efficiency of the English Commissioners in Lunacy.

Of the Naval Lunatic Hospital at Yarmouth, it is reported that it continues, as to its condition and management and system of treatment, to be most creditable to Dr. Rae, the deputy inspector in charge, and the other officers.

A hope is expressed that steps may soon be taken to place the insane soldiers (now farmed out to the proprietor of the asylum at Grove Hall, Bow) in as favorable position as are the insane sailors at Yarmouth, and that the good example afforded there will, ere long, be followed by the military authorities.

The Commissioners pass from this picture of active progress and improvement in the county asylums, to a consideration of the condition during the year of the metropolitan licensed houses. They have been each visited six times, and we are glad to learn that the reports have, on the whole, been favorable. Several cases to the contrary receive special notice, in relation to the licensed houses of Peckham House, Hoxton House, and Grove Hall, Bow. The benefits which the unsparing pressure now for nineteen years exercised by the Commissioners on the proprietors of the metropolitan licensed houses has conferred on the insane of the middle class, is beyond belief to those unacquainted with the condition of these houses then and now. The Commissioners record a painful case of suicide at Sussex House, in which a gentleman, who was subsequently shown to have taken a poisonous quantity of morphia, had been certified by Dr. Winn as having died from "insanity of six months' duration, terminating in effusion on the brain." The body having been exhumed, the coroner's jury returned, without hesitation, a verdict that the patient "died from the effects of morphia taken by him in a state of insanity." On this case the Commissioners thus remark :

It thus appeared that Dr. Winn was in no way justified in coming to the conclusion that the patient had died from natural causes. On the contrary, all the circumstances had seemed to point to the probability of his having committed suicide. His strong suicidal propensity was well known, he had had frequent opportunities of procuring poison, no post-mortem examination had been made, and his death had been most sudden and unexpected; notwithstanding which, only the ordinary returns were made to us and to the coroner, and no intimation whatever was given that there were any circumstances in the case likely to call for inquiry. Considering all these facts, the Board addressed a letter on the subject to Dr. Winslow, in which they conveyed their opinion that the conduct of Dr. Winn in this case had been culpable in a very grave degree.

The Commissioners also relate several cases of manifest shortcomings and neglect in the provincial licensed houses.

Our acknowledgments are specially due to the Commissioners for their exertions to uphold and extend the authority of the medical superintendents of the Cornwall, York Hospital, and Birmingham Asylums. It has always been the traditional policy of the Lunacy Board thus to bring forward the medical element in the government of public asylums for the insane, and these efforts have already materially raised the standing of this department of the profession. Their statement of the position of affairs at the Birmingham Borough Asylum, as showing to what lengths an ambitious steward may go in his meddling with the affairs of the asylum, is worthy of record here:

Illustrating the same important principle, we have yet to name a third example brought recently under discussion. During an official visit to the Birmingham Asylum, the Commissioners accidentally became acquainted with an arrangement adopted some years previously, which, as in the preceding case, was entirely at variance with the intentions of the Legislature. The clerk and steward had taken occasion to state, that the charge and responsibility for the general condition and good order of the establishment, for the personal cleanliness and comfort of the patients, and for everything but attendance strictly and exclusively medical, had been entrusted by the committee to himself on the male side, and to the matron on the female side.

Upon subsequent inquiry, this was found to have been the case. By the general rules of the asylum, as sanctioned by the Secretary of State, the medical officer was indeed made "responsible for the management and condition of the establishment;" but it appeared that, in 1850, a resolution had passed the committee to the effect stated, and had since that date been acted upon. It became our duty, therefore, upon the committee intimating their intention to adhere to this resolution, to point out to the Secretary of State, for whose approval it had never been submitted, not merely its irregular character, and the absence of the sanction necessary to give it force as a regulation for the government of the asylum, but the extent to which it rendered inoperative the existing regulations. Protecting the chief medical officer in that least important part of his duty which consists in administering medicines, it removed beyond his control or direction the most important part, consisting in what is called moral treatment; which upon nothing depends so much as upon the class of attendants employed, and the manner in which their duties are discharged. The result has been, that, in deference to the opinion expressed by the Secretary of State, the committee of visitors of the Birmingham Asylum have now rescinded the resolution objected to.

The insane in private dwellings are not, in England and Wales, in that happy state of liberty and comfort which Dr. Mitchell reports them to be in Scotland. "There can be no doubt," observe the Commissioners, "that generally the condition of the patients detained at home, or boarded out, is still most unsatisfactory." In Wales their condition would appear to be particularly bad.

The case of Mary Ryan is fully related in all its bearings on the removal of English patients to foreign asylums. We have, in a former number of this Journal (January, 1865), already entered into the history of this case in its legal bearings on the insane.

With regard to lunatics in workhouses—the standing blot on our lunacy arrangements—their total number on the 1st of January, 1864, was 9608; on the 1st of January, 1862, it was 8803.

On the question of lunatic wards in union-houses, the Commissioners thus write :

Our objections to separate wards for the insane in workhouses have been fully set forth in our last and previous reports, and another year's experience has strengthened the opinions we have expressed on this subject. Although, in some workhouses, improved accommodation and treatment have been provided, the rule is, that these wards are still wanting in furniture, in the means of occupation and amusement, in space for exercise, and above all, in a staff of properly qualified attendants. The dietary is generally inadequate, and, with very few exceptions, the Medical Records and the Reports of the Visiting Committees afford no information as to the treatment and management of the patients.

The Commissioners further direct attention to the condition of the idiot children of the poor in connection with the recent establishment, which they notice, of two idiot asylums for the western and the northern counties. The voluntary contributions for the latter, in Lancashire, have already amounted to £20,000. On the general bearings of the question they thus remark :

We have, during the past year, had occasion specially to consider the question of providing for the care and of training idiots as a separate class of the insane in institutions exclusively confined to that object, and wherein the system of education and treatment might be adopted which has been so successfully carried out at Earlswood, near Reigate, and at Essex Hall, Colchester. It has long been our opinion, as the result of extended experience and observation, that the association of idiot children with lunatics is very objectionable and injurious to them; and upon our visits to county asylums we have frequently suggested arrangements for their separate treatment and instruction. In some cases, attention has been given to the suggestion. We may instance the Gloucester asylum, wherein the head attendant forms the idiot boys into a class, and with intelligence and kindness superintends and conducts their exercise, amusements, and instruction. The same observations apply strongly to idiot children in workhouses. It is always to us a painful thing to see idiot children, whose mental faculties, and physical powers and habits, are capable of much development and improvement, wandering, without object or special care, about the wards of a lunatic asylum. The benefits to be derived, even in idiot cases apparently hopeless, from a distinctive system, and from

persevering endeavours to develope the dormant powers, physical and intellectual, are now so fully established that any argument upon the subject would be superfluous. The soundness and importance of such views are generally recognised and appreciated, and benevolent efforts are being made in several quarters to carry them into practical operation. It is our wish by every means in our power to encourage and promote the establishment of institutions for idiot children; and these, we think, will be most beneficial and successful if upon an adequate scale, and conducted upon the voluntary principle, so as to enlist the sympathies and elicit the liberal contributions of the wealthy and charitable. To facilitate the operations of such institutions, therefore, and the care and treatment of idiot children generally, we think it desirable that the requirements of the lunacy acts not essential to the special object should be dispensed with, and that, among other things, all forms of orders, medical certificates, returns, &c., should be as much as possible simplified; and we hope shortly to see these objects attained by legislation.

Lastly, the Commissioners revert to the condition of the insane poor in the Isle of Man. Through their active influence the insular Legislature and Parliament have at last contributed votes towards the erection of an asylum for the island. A temporary asylum was also opened, on the 1st of December, 1864. The following picture of the present state of the insane in the Isle of Man is not pleasing:

According to a return recently obtained, it appears that there are as many as 135 insane persons in the island; of this number 42 are said to be properly cared for by their friends, and 33 are already inmates of the temporary asylum, leaving 60 for whom accommodation should be provided, and who must remain without proper care and treatment until the permanent asylum is built. Many of these, we are informed, are truly deplorable cases; some have been confined in one room from 10 to 20 years, others, again, have been kept chained in out-houses or upper rooms of ordinary dwellings, their treatment never becoming known even to the neighbours; and although in consequence of the investigation made into this subject the sad condition of the insane in the island has been somewhat mitigated by the temporary accommodation afforded, yet undoubtedly a large share of misery remains unabated, and must necessarily so remain until a sufficient measure of relief is provided.

## II.—SEVENTH ANNUAL REPORT OF THE GENERAL BOARD OF COMMISSIONERS IN LUNACY FOR SCOTLAND.

The number and distribution of the insane in Scotland on 1st January, 1864, exclusive of unreported lunatics placed in private dwellings and maintained from private resources, were as follows—

| Asylums of Scotland.               | Private. |         |        | Pauper. |         |        | Total. |         |        |
|------------------------------------|----------|---------|--------|---------|---------|--------|--------|---------|--------|
|                                    | Male.    | Female. | Total. | Male.   | Female. | Total. | Male.  | Female. | Total. |
| Public and District Asylums . . .  | 409      | 408     | 817    | 1041    | 1061    | 2102   | 1450   | 1469    | 2919   |
| Private Asylums . . .              | 82       | 119     | 201    | 312     | 359     | 671    | 394    | 478     | 872    |
| Parochial Asylums . . .            | ...      | ...     | ...    | 210     | 280     | 490    | 210    | 280     | 490    |
| Lunatic Wards of Poor-houses . . . | ...      | ...     | ...    | 168     | 252     | 420    | 168    | 252     | 420    |
| Private Dwellings . . .            | 8        | 13      | 21     | 712     | 925     | 1637   | 720    | 938     | 1658   |
| Total . . .                        | 499      | 540     | 1039   | 2443    | 2877    | 5320   | 2942   | 3417    | 6359   |

The Commissioners devote several pages to a survey of the statistics of lunacy in Scotland since the institution of the Board in 1858. We are prevented by our limits from a farther notice of it. The Commissioners report steady progress in the provision of asylum accommodation for the twenty-one districts into which Scotland has for this purpose been divided. The Argyllshire Asylum at Lochgilphead is open since 1863; a suitable site has been purchased near Ayr; the Banff District Asylum is nearly finished; the Fife Asylum is also well forward, as is also the Haddington. The Inverness Asylum, the best by far of the asylums of Scotland, was opened in 1864, as was also the Perth District Asylum. The Stirling Asylum is also well forward. When, therefore, the members of the Medico-Psychological Association visit Scotland next summer, at our annual meeting, they will have a large number of new asylums to visit, and will find that great progress has been made since the last visit to Scotland of the Association, in 1858, in the care and provision for the insane poor. They will also observe how well the chartered middle-class asylums of Edinburgh, Glasgow, Perth, Montrose, and Dumfries, provide for these patients, who in England are still left to shift wearily for themselves.

The Commissioners give in this report tables of the cost of the maintenance of lunatics entailed on the several countries. Notwithstanding the more frugal habits of the country, the lower rate of wages and the lower scale of diet, &c., the maintenance rate in the Scotch district asylums is rather above the average of the English county asylums. The explanation of this lies in the smaller numbers under treatment in the Scotch asylums. There can be no manner of doubt that an asylum of 600 to 800 patients can be cheaper and more efficiently worked than one of 200 to 300.

The question of placing chronic cases of insanity in private dwell-

ings, and so relieving the over-crowded state of the public asylums, still seems to be in some sort a recognised practice in Scotland. The percentage there, as compared with England and Wales, of the habitations of pauper lunatics stand thus :

|                              | SCOTLAND.       | ENGLAND AND WALES. |
|------------------------------|-----------------|--------------------|
| In Asylums . . . .           | 52·10 per cent. | 56 per cent.       |
| In Poorhouses . . . .        | 17·11     "     | 26     "           |
| In Private Dwellings . . . . | 30·76     "     | 18     "           |

The following are the observations of the Commissioners on this important question :

Reference to the Table on page xiv. will show the manner in which patients accumulate in asylums. This tendency is owing to a variety of causes, but in a great degree to the Lunacy Acts giving more consideration to the means of placing patients in asylums, than to precautions for ensuring their discharge in the event of detention ceasing to be necessary. Under the existing system, the duty of discharging patients rests, almost without control, with the superintendent of the asylum. It is he who determines whether the patient has recovered, or whether he continues to be of unsound mind. Great power is thus placed in his hands, affecting not only the welfare of the patients committed to his care, but the pecuniary interests of those responsible for their maintenance. It is very natural that superintendents of asylums should acquire the conviction that the insane can nowhere be under more favorable circumstances than in such establishments, and that they should even doubt the propriety of discharging any one who has not recovered. But it must not be forgotten that superintendents have but limited means of becoming acquainted with the treatment of patients in private dwellings, and that the question of detention, where pauper lunatics are concerned, should be determined in the interests of the public as well as in those of the insane, who, it should be borne in mind, constitute but a section of those having claims on the charity of the nation. It might be proper and humane to provide hospitals for the treatment of all the poor suffering under mental or bodily ailments, in which they would receive the most judicious treatment, and enjoy far greater comforts than they could possibly command in their homes; but the State would shrink from any such general measure of relief, not only as uncalled for, but as detrimental to the independence and moral character of the people. In all charitable undertakings, their feasibility and ultimate effects should be well considered; and it may accordingly be well to inquire whether it is necessary or even proper that the insane should, with but comparatively few exceptions, be separated from the rest of the community and be congregated together in asylums. "By sect. 17 of 25 and 26 Vict. cap. 54, it is enacted, that when it shall appear to any superintendent of any asylum that any lunatic detained therein has so far recovered that he may be safely liberated without risk or injury to the public or the lunatic, such superintendent shall grant a certificate to that effect, and shall transmit a copy thereof to the person at whose instance such lunatic is detained; and in the failure, within fourteen days from the despatch of such copy certificate, of the person, to whom the same was transmitted, to take steps for the liberation of such recovered lunatic, such superintendent shall intimate the facts to the Board, who may direct such inquiry into the circumstances as they deem necessary; and if satisfied that the lunatic has recovered, or that he may be safely liberated without risk or injury to the public or himself, the Board may order his discharge forthwith."

This enactment satisfies us that it is not the intention of the Legislature that

chronic patients should be detained in asylums for no other reason than that they continue of unsound mind; and we would therefore infer that their detention is justifiable, only when their discharge would prove incompatible with the safety of the public, or with their own safety or welfare. Accordingly, we are of opinion that it is the duty of a superintendent, while authorising the continued detention of a patient, to satisfy himself not only that there is unsoundness of mind, but that it is of a character which, taken into consideration with the circumstances in which he would be placed on removal, would render it manifestly unsafe or improper to confide him to private care, and which, in the case of a pauper, would justify his maintenance at the public expense. Even supposing that a pauper would be better provided for in every respect in an asylum than in a private dwelling, it would still be open to doubt whether this fact would of itself afford adequate grounds for extending to him the benefits of gratuitous accommodation and treatment. The charity of the nation, like that of individuals, must have its limits; and a choice must therefore be made of the manner in which the national charitable fund shall be expended. Whether the extent in which it should be applied for the relief of the insane poor should be left, as much as is at present the case, to be practically determined by superintendents of asylums, becomes, therefore, a question of deep import. It must, no doubt, be difficult to determine with certainty whether any insane person may be liberated without risk or injury to the public or the lunatic, or without any material impairment of his comforts or welfare; but, on the other hand, there may be an excess of caution, involving an unnecessary increase of the parochial burdens.

Connected with the arguments thus used by the Commissioners must be the condition of the insane poor in private dwellings, and the comparative cost of their maintenance there and in the asylum. In Scotland, the cost of maintenance in the former is sixpence a day as against one shilling and fourpence in the district asylums. Of their condition in private dwellings, the Commissioners thus speak:

The condition of single patients has been investigated during the past year in all the counties of Scotland, with the exception of Orkney and Shetland. The total number of pauper patients reported on was 1620. Of these, 1489 were seen, and 85 reported on without being seen, owing to tempestuous weather and other causes. Reports were likewise made respecting 133 private patients, nearly all of whom were visited and seen; but these constitute but a fraction of the total number of the private insane resident in ordinary dwellings. The General Reports on the condition of single patients by the Deputy-Commissioners, which we have printed in Appendix F, will convey some idea of the extent and operation of the system of home-visitation, which is a marked feature in the business of our Board, and which is mainly conducted by these gentlemen. By their instrumentality, with such assistance as the Medical Commissioners have been able to afford, we have acquired an extensive and accurate knowledge of the condition of pauper single patients in all parts of the country, and we have the satisfaction of stating that, by the repeated suggestions made at successive visits, a considerable improvement has been effected. Occasionally, however, all our endeavours fail to produce amendment, and we are then obliged to have recourse to removal to asylums. But, at this juncture, our efforts are frequently defeated by the resistance of relatives who, rather than consent to removal, withdraw the name of the lunatic from the poor-roll. With this act our power of interference ceases, and we have, accordingly, learned to proceed with caution, lest in our endeavours to secure improvement we only deteriorate the condition of the patient.

The mortality among pauper lunatics in private dwellings in 1863 was as follows :

| Average Number of Patients in 1863. |         |        | Deaths. |         |        | Mortality per Cent. |         |        |
|-------------------------------------|---------|--------|---------|---------|--------|---------------------|---------|--------|
| Male.                               | Female. | Total. | Male.   | Female. | Total. | Male.               | Female. | Total. |
| 730·0                               | 927·5   | 1657·5 | 47      | 40      | 87     | 6·4                 | 4·2     | 5·2    |

In the same year, the mortality in the lunatic wards of poorhouses, licensed for the reception of chronic and incurable patients only, was 8·2 for males, and 9·1 for females. The mortality among single patients was thus considerably less; and, indeed, so far as mortality is a test of treatment, the condition of single patients must be considered as more favorable than that of any class in establishments. It is, however, obvious that it is only with the inmates of lunatic wards of poorhouses that a comparison entitled to the smallest consideration can be instituted.

In England, as is evident, even in the present report of the Commissioners, this farming out of the insane to the care of their friends in private dwellings has hitherto been a failure. Possibly the habits of the people, and the greater wages given for work, may be found a permanent barrier to its adoption. Until, however, the charge of the insane thus placed in private dwellings be transferred from the guardians of the poor and their over-worked and inefficient medical officers, either as in Scotland, to the entire control of the Commissioners in Lunacy, or better (as we have elsewhere suggested), to the visiting justices and medical superintendent of the county asylums, the question cannot be considered as having been fairly stated. Our opinion, however, is that the number of chronic lunatics fitted to enjoy this amount of liberty is smaller than the Scotch Commissioners appear to believe. Moreover, in England, there would be a lesser saving to the ratepayers on the system. Patients cannot here be boarded out under one shilling a day, independent of the cost of visitation and of clothing, which would bring the expense to much the same as in the county asylum. And certainly the patients in the county asylums of England, and those boarded with the peasantry, are in a very different position of comfort and well being.

The Scotch Commissioners conclude their able and elaborate report with remarks on the present condition of the public and private asylums, of the parochial asylums, and of the lunatic wards in poorhouses throughout Scotland. We regret that our limits forbid our further discussing these questions. To all interested in the condition and management of the insane in Scotland, this report will afford the fullest information. The mass of statistical tables appended to it are another evidence of the zeal and

untiring industry of the General Board of Commissioners in Lunacy for Scotland.

C. L. R.

*We are compelled to reserve to a future occasion our notice of the Fourteenth Report of the District, Criminal and Private Lunatic Asylums in Ireland.*

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### PART III.—QUARTERLY REPORT ON THE PROGRESS OF PSYCHOLOGICAL MEDICINE.

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NOTE BY THE EDITORS.—*We are reluctantly compelled by the space occupied by the lengthened Report of the Annual Meeting of the Medico-Psychological Association, and the Original Articles contributed to this number, to omit the Quarterly Reports on the Progress of Foreign and English Psychological Medicine.*

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### PART IV.—NOTES AND NEWS.

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#### THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

*Proceedings at the Annual Meeting of the Association, held at the Royal College of Physicians, on Thursday, July 13th, 1865.*

THE Council met in the College at ten A. M., Dr. Monro, President, in the chair.

The morning meeting was held in the large library at eleven, A. M.; the afternoon meeting at three, P. M.

Members present:—Dr. Wood (President), in the chair; Baron Mundy, Dr. Thurnam, Dr. Hitchman, Dr. Kirkman, Dr. Monro, Dr. Boyd, Dr. Davey, Dr. Langdon Down, Mr. Sankey, Dr. Duncan, Dr. Maudsley, Dr. Robertson, Dr. Paul, Dr. Gardiner, Dr. Tuke, Dr. Willett, Dr. Arlidge, Dr. Hunt, Dr. Belgrave, Mr. Iles, Dr. Blandford, &c. &c.

Visitors:—Dr. Haviland, Dr. Hart Vinen, Dr. Webster, Rev. A. Garfitt, Dr. Thorold.

*Dr. Monro.*—In resigning this chair to my successor, I would express my sense of the great honour which I have received in having occupied it. I feel how little I have been able to do to advance the interests of the Association; but, at the same time, I feel that owing to our meeting only once a year, any want of improvement is not entirely my fault. I wish heartily that measures of progress could be more often discussed. Our meetings at present certainly are of a thoroughly English character: we generally begin with an agreeable soirée, we then discuss important measures, and finally we finish with a good dinner. Still, it would be a very good thing if we had more frequent meetings, and also, I think, if we had a place of our own to meet in. I must not, however, detain you, for there is a great deal of matter to be discussed, and you will have an interesting address from Dr. Wood. Before vacating the chair, I may say that there is no one to whom I would rather do so than to my friend and colleague, Dr. Wood, with whom I have been associated for many years in a mild and gentle intercourse, which I truly rejoice at. I beg to resign the chair to Dr. Wood.

*The President*, on taking the chair, delivered the following **ADDRESS**:

My first duty, gentlemen, in taking this chair, is to thank you very sincerely for the distinction you have conferred upon me by placing me in the position of your representative for the ensuing year.

The honour of presiding over any gathering of scientific men within these walls is one of which any physician may feel proud; and the very fact of this privilege being accorded us is a recognition on the part of the most distinguished medical corporation in the kingdom, of the importance of our Association, and of the noble purposes for which we are banded together.

It is a source of gratification to me to have been chosen to stand on the roll of your presidents next to my esteemed friend and colleague who preceded me in this office, and I shall be quite content if I succeed in performing the duties as much to your satisfaction as he has done.

In addition to hereditary professional rank as the direct representative of a long line of eminent physicians who have distinguished themselves in this department of medicine, he has made for himself an independent reputation, and with the genuine philanthropy of a Christian gentleman has given much of his time to provide for the necessities of the destitute, while the enjoyment of his leisure hours has been the cultivation of art. With such antecedents, such a disposition, and such habits and tastes, he could not fail worthily to fill such a position as that from which he has just retired. It was under the guidance of his revered father that, as a junior colleague, I learned almost my first lessons in insanity; and it has been a source of peculiar pleasure to me that, although in another field, it has been my good fortune to be associated in similar duties with the worthy representative of so excellent a man and so faithful a friend.

The modesty of our late President led him to establish a precedent which I am not disposed altogether to disregard, for I think the usage of our Association may with advantage be modified as far as regards the time occupied in the delivery of an elaborate address. While, therefore, I am not entitled to claim the exemption for which he stipulated, I yet propose so far to follow his example as to trespass but briefly upon your attention, for our time is short, and there are important subjects awaiting our consideration. The notices of some of these read as if they were controversial; but I need hardly express a hope that whatever differences of opinion these questions may elicit, we shall all be prepared to give one another credit for desiring the same things, viz., the welfare of that large family of our afflicted fellow-creatures who look to us specially as their protectors, and the prosperity of our Association. Nothing, certainly, is so essential for the prosperity of any society as hearty co-operation; and in proportion, I believe, as we make this our

rule of action, will be our power of usefulness both to the insane community and to ourselves. To adopt the motto of a small but gallant neighbouring nation, "*L'Union fait la force,*" and if we would influence public opinion and exercise any control over legislation in reference to insanity, we must present a united front. We have to bear in mind that the public looks with a degree of suspicion, if not upon ourselves personally, at least upon the powers entrusted to us, and upon the opinions we are occasionally called upon publicly to express. And for these and other reasons we scarcely occupy so good a position in the estimation of the public as those other members of our profession who have not made the treatment of insanity the study of their lives. There are many intelligible causes which, no doubt, contribute to this state of things, and among them the most prominent may be traced to prejudices and mistaken notions, which are, in fact, the remnants of superstition and ignorance. The ideas of former times still prevail to a great extent throughout society, nor are the members of our own profession entirely free from them. The surprise so often expressed by visitors to asylums at the order and tranquillity of these establishments, is evidence that they were prepared for a very different sight, and that they had hitherto entertained the most mistaken notions as to what constitutes insanity in a large proportion of the cases detained under care and treatment. Indeed, it is astonishing how frequently, even among the educated classes, a person whose mental condition has become impaired is at once looked upon as separated by an indefinite distance from his fellow-creatures in almost all that relates to the pursuits and duties of life. The world, knowing little of the almost imperceptible differences which in many cases separate the sane from the insane, assumes the existence of a great gulf between them; and except when personally concerned or interested in individuals, is content to avoid so painful a subject, and all concerned with it.

Having occupied the various positions, both in public and private, through which our members pass to the higher appointments which are open to them in connection with asylums and hospitals for the insane, I know something of the sacrifices they make for the public good, and therefore of the claims which, I believe, if fairly represented, there would be every disposition, on the part of the legislature and of the magistrates throughout the kingdom, to recognise. As a general rule, I think we shall all be prepared gratefully to acknowledge the consideration and support which we receive from the governing bodies of the institutions to which we respectively belong. And with regard to the hospital to which I have the honour to be attached, I may say that nothing can exceed the courtesy and kindness shown to the medical officers. Notwithstanding the prejudices we have yet to combat, we may without any arrogance claim a high place in the ranks of those who devote themselves to the service of their fellow-creatures, for of all the derangements to which the delicate mechanism of our mysterious being is liable, none can require the exercise of higher qualities of mind and character in their treatment than that which reduces the highest intelligence to the helplessness of infancy, and throws upon us the noblest duty that one frail mortal can be called upon to perform for another. The mental physician must be patient and self-denying; gentle, yet resolute; sensitive, yet discreet: he must be content with very moderate worldly advantages, for, as a rule, his ambition must be limited to the immediate sphere of his duties. In one sense his aspirations must be of the loftiest, having for his vocation and aim the restoration of man's most noble attribute. In another sense, they must be of the narrowest, for he is too often forbidden to let any beyond the walls within which he labours benefit by his experience. Notwithstanding this, as I believe, most unwise restriction, it yet remains our especial province to enlighten the public on the subject, and to remove the

erroneous impressions which exist so greatly to the disadvantage of the insane.

It is in view of this duty that our position assumes an importance which can scarcely be over-estimated, for to our judgment are constantly referred questions of the deepest interest and the most momentous consequences, affecting the domestic happiness of families and the future welfare of individuals—to say nothing of those perplexing problems involved in the pleadings of insanity and the mental fitness to dispose of property, which in the most able hands tend to opposite conclusions. There can scarcely be a more difficult, delicate, and important question submitted to the thoughtful consideration of a physician than that which is suggested by the anxieties of the friends of young persons about to contract marriage, when it has been found that some near relative of one of the parties has suffered, or is even at the time suffering, from insanity. There are many persons so situated who, from conscientious motives which we cannot but respect, determine this question for themselves, and firmly maintain the resolution to continue single for life. It would be well for society if these formed a larger class; but it is perhaps expecting too much of human nature to calculate upon such self-denial being at all general, and consequently the duty devolves upon us of advising the parties, and no duty which can be imposed upon us requires in its performance greater discretion. Doubtless the advice, whatever it may be, is more frequently disregarded than acted upon. For this we are not responsible; we can only exercise our judgment to the best of our ability. But we may be sure that our decision will be severely criticised, and that our reputation will be in some danger of suffering if we have given a hasty opinion. It is unnecessary to dwell upon the great variety of momentous questions which are continually propounded to us as illustrating the perplexing and anxious nature of our duties as alienists, but we could scarcely have a more striking instance of the extreme difficulty of these inquiries than that which is afforded by the memorable case of Townley, whose mind was pronounced to be sound and unsound at the same time by equally high and unquestionable authority, and whose wretched end not only strengthened the opinions of those who contended that he was a fit subject for punishment, but also of those who held that by reason of mental infirmity he was irresponsible.

In speaking of the error, which is so common, of exaggerating mental disturbance, we may not forget that there is a difficulty in the opposite direction of no less importance, and perhaps even of a more dangerous nature, viz., that of unwillingness to recognise the incipient stages of insanity and the determination to adopt any rather than the true explanation of symptoms which are so much dreaded. This is very much owing to the views held by members of our own profession; and legislation has undoubtedly tended to increase the difficulty by measures which, though intended for the protection of the insane, have had the very opposite result. Hence it is not an uncommon thing for medical men to refuse to certify rather than incur the personal responsibility which attaches to the performance of such a duty. And it has occurred to me to witness the anxiety and distress of the friends of patients, who, under these circumstances, have been powerless to exercise any effective control. In my opinion legislation is yet required to give provisional authority to deal with the incipient stages of insanity, and to protect medical men in the performance of duties which are imperatively necessary, and which indeed may not be neglected without danger to society. The interests of the patient, too, are often seriously compromised by neglecting proper treatment on the first appearance of the malady; or, by what is sometimes still worse, attempting injudicious interference. Might it not be competent for a county court judge, who is now invested with some of the

power hitherto wielded by the chancery judges, or for a magistrate, to issue a permission in private for a limited period on the affidavits of the medical attendant, or others, giving authority to the friends to place a patient under control in his or her own house, which authority should carry with it power to introduce medical men for the proper examination of the patient, and should be for them a legal justification? At present, if a patient be cunning or rational enough to stand on his rights and refuse admission to the doctors, a certain risk attends any one who intrudes unbidden, and the public is sure to sympathise with one who, under such circumstances, has been approached by stratagem and then removed under false pretences. And yet the law, as it appears to me, most ungenerously leaves the parties to neglect their duty or to practise deception, rather than define how an obvious duty may be properly performed. It is not dealing fairly with the members of our profession to leave them in the power of any alleged lunatic to involve his medical attendant in the costly defence of an action for having done that which it was his duty to do, no less in the interests of the patient and his family, than that of society generally.

If a medical practitioner, on approaching a patient, could tell him candidly that he had legal authority to visit him for the purpose of forming an opinion of his state of mind, there would be no need for the evasions and subterfuges which are so often resorted to, and sometimes so injudiciously, and one reasonable ground of complaint would often be avoided; for the insane are not less sensitive than other people on the point of deception practised towards them, and it is not unfrequently the ground of their reproachful remonstrance that they were unnecessarily deceived, while had they known the purport of the visit they would have behaved quietly. As it is, evasion in too many cases is the only way of avoiding violence and a public exposure of a very distressing kind, which would often be prevented by being in a position to deal candidly with the patient.

Again, legislation is required to deal more economically with very small properties of persons who become insane; or, at least, with their incomes. For, as the law stands, or rather in the absence of any law on the point, it is only by suppression of the facts or by some irregular proceeding that the relatives of a patient can make his income available for his own or his family's maintenance; so that the means of frustrating any plans and depriving himself of the benefit of proper treatment, and possibly of the chance of recovery, are, as it were, deliberately given and not unfrequently made use of by the patient, to the prejudice of himself and the extreme perplexity of his family.

Neither does there appear any reason why the law should hold out to certified patients a temptation to escape from the position in which the law itself has formally sanctioned their being placed for the purposes of treatment. The very knowledge on the part of patients that if they can succeed in escaping from control and conceal themselves for fourteen days they are free, acts in many cases most prejudicially, and exposes their friends to a great deal of unnecessary anxiety. If it is lawful and right that they should be kept under control, it seems inconsistent to encourage them to break from that control; and the promise of freedom—perhaps the most tempting offer that can be made to them—if they succeed in deceiving those in charge of them is calculated to keep alive not only a feeling of wrong inflicted upon them which they ought not to endure, but to maintain a condition of restlessness and excitement which seriously affects their prospects of recovery. Of course, as a rule, tranquillity of mind is the most important condition that we endeavour to secure for our patients, and in many cases it requires the most judicious management to bring them to acquiesce in the propriety of their separation from the world. Uncertainty of any kind is very in-

jurious, and surely nothing should be done or countenanced which encourages the idea that they are in any sense oppressed. In fact, the direct encouragement to break what ought to be considered the law, may naturally suggest the idea that the whole proceeding is illegal; and we all know how frequently this view of the case is urged upon us by those patients who, though insane, are yet rational enough to argue on the legality of their detention.

All legislation, in fact, seems to assume the necessity of protecting the insane from those whom they should be taught to consider their friends and protectors.

It is specially to the members of our Association, which embraces almost all the practitioners in lunacy in the kingdom, and which also claims as belonging to its family the superintendents of the asylums in India and the colonies,—it is, I say, to us that the public must look for guidance on the subject of insanity. For the omission of this study from the course of instruction prescribed for the medical student, can only have resulted in the very imperfect information of medical practitioners, and consequently in the general ignorance of society of all that relates to the subject.

It is satisfactory to know that a beginning has been made to supply this most important part of a thorough medical education, and in more than one medical school in the metropolis special lectures have been delivered on insanity. The time has, perhaps, scarcely arrived for making such attendance compulsory, because I believe that lectures alone, if not illustrated, would be of comparatively little value; and the experiment has yet to be tried of how far the hospitals and the asylums in the neighbourhood of London can be made available for the instruction of all the medical students who flock to the metropolis. Occasional visits may no doubt be made with very great advantage to county asylums at a distance from town, but for the purposes of systematic teaching, it must be institutions within a moderate distance to which we must principally look for the means of illustrating the lectures delivered in the schools. While, therefore, I am a warm advocate for making the study of insanity a part of the medical curriculum, and hope to see the facilities for such studies afforded to every student of medicine, I should deprecate any hasty legislation on the subject, and think it would be unwise to attempt to make that immediately compulsory, which yet requires the experience of a permissive arrangement. There can be no doubt that any teaching which is not practical must be unsatisfactory, but as regards insanity, illustration is essential; for the most accurate description fails entirely to convey any intelligible idea of the infinite variety of cases with which it is necessary for every practitioner in medicine to be familiar, who would assume the responsibility of treating insanity, and advising the relatives of insane persons.

The Report on the Superannuation Clause will explain to you better than I can what is asked for superintendents of asylums.

The claims of such of us as are giving up our lives to the service of the insane, and through them to the service of the public, will not be questioned by any who know what that duty involves, and what sacrifices must be made in performing that duty efficiently. There is, I suppose, no position in life where the nervous system is subjected to a more severe and continuous strain than in that occupied by a medical superintendent of an asylum. I think we are all on the same footing in this respect: I mean, that what is wanting in the anxieties and labours of one, is compensated for by some increased cares in another, and, that this is the same whether engaged in conducting a private licensed house, or in managing a large county asylum. In the latter, however, as I think unwisely, the resident superintendent is debarred from the opportunity of improving his income, and

giving society the benefit of his experience, by regulations which oblige him to devote the whole of his time to the duties of his office. I doubt much those duties being any better performed by a man whose time is entirely passed within the walls of an asylum, and who is practically denied the advantage to be derived from that interchange of ideas which is such a relief to the arduous labours of other practitioners. Doubtless there are those who, with studious habits, prefer comparative seclusion, and to whom the retirement of an asylum is as congenial as the cloisters of a college; but even to those so constituted, there are depressing influences from which other classes of students are exempt. And, after all, most of us are possessors of temperaments which expose us to greater wear and tear of mind and body than perhaps any other class of professional men. Instances of longevity are comparatively rare in our profession, and in our special branch of it we cannot but be painfully conscious of the frequent occasions when we are reminded not only of the uncertainty of life, but of the danger to which we are all exposed, of breaking down under the life of toil and anxiety which is inseparable from our vocation. It is true that we are so differently constituted, that one is able to bear what would crush another; but to all the burden is a heavy one. Within the last twelve months two of our members have been compelled to seek in prolonged absence from their duties a restoration of health, which had been seriously impaired; and we have seen, with much regret and sympathy, those who have borne the burden and heat of the day—who once stood foremost amongst us, one after the other, fall out of our ranks overladen and overwhelmed with their task, and leaving to us a warning which we shall do well to heed.

The time and place seem appropriate to pay a passing tribute to the memory of one who, though not a member of our Association, was, as a chancellor's visitor, in some respects identified with us. The late Dr. Southey, who has just gone to his rest full of years and honours, was a distinguished fellow of this college, and those of us who were brought into official contact with him will bear their willing testimony to the kindness and consideration with which he performed his duties, whilst the profession generally, and, indeed, all who knew him, felt that he was in every way worthy of the distinguished name he bore.

If I have appeared to dwell upon the shady side of the picture which our careers represent, I am not unconscious of the bright, I may say of the brilliant, side; for while we have much to harass and to trouble, we have a compensation in the joy with which it is at times our privilege to hail the return of reason, and surely there can be no compensation comparable to that of restoring to the bosom of the great human family even one wandering spirit. We have, then, a noble vocation, I might say, a sacred mission; and if we labour truly to do our duty, assuredly our reward will be great.

“The lives of great men all remind us,

We may make our lives sublime,  
And departing leave behind us  
Footprints on the sands of time.

“Footprints that perhaps another,  
Sailing o'er life's solemn main,  
A forlorn and shipwrecked brother,  
Seeing, shall take heart again.

“Let us, then, be up and doing,  
With a heart for any fate;  
Still achieving, still pursuing,  
Learn to labour and to wait.”

*Dr. Tuke* announced that he had received letters of regret for their unavoidable absence from M. Brierre de Boismont, M. Jules Falret, Dr. Browne, Dr. Lalor, Dr. Laycock, Dr. Sankey, Dr. Stewart, Dr. Burnett, and several other members.

*Dr. Thurnam*.—I cannot refrain from rising at this point in our proceedings, and before the ordinary business is proceeded with, to move that this Association express its deep sense of the highly able and eloquent address we have just had the pleasure of listening to from the President. It appears to me that to defer it to a later period of our proceedings would not be acknowledging the merits which I am sure we all feel belong to it.

*Dr. Monro*.—I am very happy to second that.

[*The President*.—I must not be so vain as to occupy your time any further. I thank you very sincerely for your appreciation of my humble efforts to do my duty here; and I also beg to thank my friend, Dr. Thurnam, for the kind way in which he has proposed such a very complimentary resolution.

*Dr. Monro*.—Will you allow me to ask whether it is customary on these occasions to go into any points which have been particularly mentioned in the President's address, or whether the short space of time at our disposal would compel us to go on with the ordinary business? I beg to ask the question, because I feel that many of the things which Dr. Wood has so eloquently put forward, are matters of the greatest interest and importance; and I should have been very glad to hear what various members of the Association may have to say upon them. Of course there are other subjects which Dr. Wood has not referred to, but those which he has referred to are matters which press very heavily upon us; and I think it would be doing honour to him, as well as to the subject, to allow ourselves the opportunity of going into those points a little, unless there should be a special reason against it.

*Dr. Tuke*.—I think I may answer that it is not the general custom to discuss the President's address. We are not at all bound by the opinions he may utter, and it would be, I think, extremely inconvenient if the meeting were to discuss the opinions of individual presidents. There may be some on which we should differ very much. I think it is not the general practice of the Association to discuss them. I speak in the presence of members of the society who have filled the office of president in former years.

*Dr. Arlidge*.—It seems to me very undesirable that the suggestions made by our presidents from year to year should be allowed to drop through and be taken no notice of, which will be the case if the address is not to be discussed. I think it would be very desirable that the suggestions should be put before a committee of the Association to be reported on at a future meeting. We hear from year to year very valuable suggestions thrown out by the President in his address, but we hear no more of them afterwards; and I think we should be gainers if we were to adopt some such system as I have mentioned.

*The President*.—I think, perhaps, the more convenient course will now be to take the business as it appears in the agenda before us, and then if we have time to raise any of these other points for more particular consideration, it will be competent for us to do so; but our time is short, and I am afraid we shall soon find it slip away in discussing what is put before us as a matter of form and necessity. The first question, I believe, according to the ordinary routine is to determine where shall be THE NEXT PLACE OF MEETING. There is something a little peculiar connected with that question upon the present occasion, inasmuch as the place of meeting this year is bound up almost necessarily with the election of your next President. Now, I believe I am authorised to say that if we shall determine that the

meeting shall be at Edinburgh, we shall have the great advantage of the presidency of Dr. Browne, the distinguished Commissioner in Lunacy for Scotland. I think, therefore, that the circumstances under which we might meet at Edinburgh, are so favorable to the interests of the Association, that I would now move from the chair that our annual meeting in 1866 be held in that city. I propose, therefore, that we now proceed to determine whether or not the place of meeting next year shall be Edinburgh? If any gentleman has any other place to propose, or any observation to make upon the subject, I shall be very happy to hear him; but if no member has any observation to make upon the question, I will put it at once to the meeting.

The resolution was seconded by *Dr. Lockhart Robertson*, and carried unanimously.

*The President.*—The next business, then, gentlemen, will be to proceed to THE ELECTION OF PRESIDENT, which, it appears by the rules, must be by ballot. I venture to propose, then, with your permission, that Dr. Browne, the Commissioner for Scotland, be our next President.

*Dr. Monro.*—I beg to second that.

The ballot was, according to the existing rules, then taken, the names being written on the papers. The result was, that Dr. Browne was elected.

*The President.*—The next duty will be to appoint EDITORS FOR THE JOURNAL.

*Dr. Duncan.*—I propose that the editors, Dr. Lockhart Robertson and Dr. Maudsley, be re-elected.

*Dr. Shepperd.*—I have much pleasure in seconding that. (Carried unanimously.)

*Dr. Monro.*—I beg to propose that we re-elect THE TREASURER, Dr. Paul.

The motion was seconded by *Dr. L. Robertson*, and carried unanimously.

*The President.*—The next duty is to appoint the GENERAL SECRETARY.

*Dr. Hitchman.*—I propose that Dr. Harrington Tuke be re-elected General Secretary.

The motion was seconded by *Dr. Gardiner*, and carried unanimously.

*Dr. Tuke.*—Mr. President and Gentlemen,—I am very much obliged to you for re-electing me. I am breaking through the routine of silence for one moment; first, to thank you, and secondly, to congratulate the society upon its present flourishing condition, having to-day, I am happy to say, a list of new members larger than ever. I only wish to take the advantage of my present opportunity of speaking to mention the great importance of our annual discussions. Dr. Arlidge mentioned to-day the advantage of discussing some of the topics touched on by the President. I may say that our discussions on Bethlehem, begun first by Dr. Robertson, continued by myself last year, and to be continued this year by Dr. Robertson, have been read with much interest. I may instance, for example, that Dr. Robertson's remarks upon Bethlehem have been largely quoted in the medical papers; and, I had the honour of being summoned to give evidence before the Commission for the Abolition of the Punishment of Death, solely from the fact of our resolution upon this subject having been unanimously passed. The members of both Houses took great interest in the fact of the Association having unanimously passed the resolution, and they asked whether it was so, and whether we did not some of us differ. I am quite sure we shall hereafter be of a great deal of use in Psychology in discussing subjects, and coming to conclusions—if unanimously, of course so much the better. I have to thank you very much for my re-election.

*The President.*—The next question is, whom you will please to appoint as your AUDITORS.

*Dr. Robertson.*—One Auditor, Mr. Sankey, is eligible for re-election, and Dr. Helps retires. I beg to propose that Dr. Sheppard takes his place.

*Dr. Monro.*—I beg to second that.

The resolution was put to the meeting, and carried unanimously.

*The President.*—We have now to elect THE HONORARY SECRETARIES FOR SCOTLAND AND IRELAND.

*Dr. Robertson.*—I propose the re-election of Drs. Rorie and Stewart.

This was seconded by *Dr. Maudsley*, and carried unanimously.

*The President.*—We now proceed to the election of MEMBERS OF COUNCIL.

*Dr. Arlidge.*—It will be very desirable to know the names of the Council.

*Dr. Tuke.*—At present the names of the members of the Council are Drs. Conolly, Hitchman, Duncan, Davey, Sibbald, and Sir Charles Hastings. I may say, the Council to-day have debated this question, and it was proposed that the number should be increased—that the present members should remain, and that two new names—those of Dr. Thurnam and Dr. Boyd—should be added. It may save time, the Council having recommended that, to put it as the suggestion of the Council, and to state that we propose to alter the rule, making the Council consist of eight members instead of six.

*Dr. Maudsley.*—I beg to propose that the former members of the Council be re-elected with the addition of Dr. Boyd and Dr. Thurnam.

*Dr. Paul.*—I beg to second that.

The motion was carried unanimously.

*The President.*—The next business before us will be the REPORT OF THE TREASURER.

*Dr. Paul* read the Treasurer's Report.

*The Balance Sheet of the Treasurer of the Medico-Psychological Association, presented at the Annual Meeting,  
held July 13th, 1865.*

## *Notes and News.*

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Examined and found correct,

(Signed) HEURTLEY SANKEY, Auditor.

July 13th, 1865.

*Dr. Maudsley.*—I beg to move that the Treasurer's Report be adopted.

The motion was seconded by *Dr. Robertson*, and carried unanimously.

*Dr. Tuke.*—I have now to propose the election of twenty ordinary members, whose names have been submitted to and approved by the Council this morning. The rules require that the election of members be by ballot, and I would ask the President whether he requires that a separate ballot be taken for each name, or whether a general ballot may not suffice?

*The President.*—The rule only requires that new members should be by ballot; it does not specify that it should be a separate ballot for each individual. I think there is no doubt about that. If you find any black balls at all—if there is only one black ball—we may then proceed to ballot separately for each member; but I conceive there is nothing at all in opposition to the letter and spirit of our rules in balloting for the whole, in the first instance, together.

*Dr. Tuke* read the names of the members, which were as follows:—

Edward S. Haviland, M.D., 13, Lyon Terrace, Maida Hill.  
 T. B. Belgrave, M.D., County Asylum, Lincoln.  
 Charles Berrell, Esq., County Asylum, Warwick.  
 J. N. Simpson, M.D., County Asylum, Gloucester.  
 Hyde McPherson, Esq., Borough Asylum, Norwich.  
 J. Edmundson, M.D., District Asylum, Clonmel.  
 Algernon Chapman, Esq., County Asylum, Abergavenny.  
 Luke Baron, M.D., Fort Pitt, Chatham.  
 F. Davidson, M.B., District Asylum, Banf.  
 Walbridge Snook, Esq., General Hospital, Northampton.  
 Daniel Iles, Esq., Fairford, Gloucestershire.  
 Frederick Sutton, Esq., County Asylum, Thorpe, Norwich.  
 H. C. Bastian, Esq., Broadmore Asylum.  
 Harry Manning, Esq., Laverstock House, Salisbury.  
 Stanley Haynes, M.D., Laverstock House, Salisbury.  
 W. Harris, Esq., Wandsworth.  
 G. Eames, M.D., District Asylum, Letterdenny,  
 Edmund Lloyd, Esq., Assist.-Med. Officer, Post Office.  
 Hart Vinen, M.D., Chepstow Villas, Bayswater.  
 Frederick Lewins, M.D., Hayward's Heath, Sussex.

The twenty gentlemen were unanimously elected.

*Dr. Tuke.*—The list of Honorary Members proposed by the Council of the Association this year, are the following:—Dr. Lasègue, M.D., Paris; Dr. Jules Falret, M.D., Paris; Dr. Legrand du Saulle, M.D., Paris; Dr. Biffi, M.D., Milan; Dr. Schlager, M.D., Vienna; Dr. Leidesdorf, M.D., Vienna; Dr. Bulckens, M.D., Gheel; John Blake, Esq., M.P.; W. H. Wyatt, Esq., J.P., Chairman of the Committee, Colney Hatch.

The gentlemen whose names had been read were balloted for, and unanimously elected Honorary Members.

*Dr. Tuke.*—The Editors of the Journal have received the following letter from the Right Rev. Bishop Willson, the Roman Catholic Bishop of Hobart Town.

“7, MANCHESTER STREET, W.;  
 “July 6th, 1865.”

“GENTLEMEN,—I am requested by my uncle, Dr. Willson, the Catholic Bishop of Hobart Town, to express to you his gratification, on his return to this country, at finding the cordial manner in which his exertions to improve the management of some of the Australian Lunatic Asylums, have been remarked upon in the ‘Journal of Mental Science.’”

“Dr. Willson wishes me to remind you that he was one of your honorary

members at the time when the annual meeting (the first?) was held at Lancaster, and he would highly esteem the honour, could he be restored to the list of honorary members, from which a long absence in Tasmania has, I presume, disqualified him.

"I regret to have to inform you of the reason that Bishop Willson does not himself write to you—he is suffering from paralysis of the right limbs, which seized him on the voyage home, in March last, and confined him to his cabin for three months.

"It is satisfactory to state that there is some return of strength in the limbs.

"I have the honour to remain,  
"Gentlemen,  
"Your obedient servant,  
"T. J. WILLSON.

*"To the Editors of the 'Journal of Mental Science.' "*

I presume Bishop Willson's name has been forgotten; I therefore ask that this gentleman may be put on the list of honorary members as being re-elected to-day.

*The President.*—I do not know, gentlemen, whether it is necessary formally to put the question to which Dr. Tuke has just drawn your attention. It appears that the Bishop of Hobart Town is really one of our honorary members, but by an omission on the part of some of our previous officers his name has not been printed in the list. We shall, of course, be glad to rectify that omission, having our attention called to the fact. Unless, therefore, it is the wish of the meeting, I do not propose to put that question. I think we may assume it as a matter of course. Another letter, gentlemen, that I hold in my hand, has been received from the Secretary of the American Association of Medical Officers of Asylums, complaining of some remarks that were made in our Journal on a gentleman, who was formerly President of that Association, but who fell in the war between the Northern and Southern States. It was, perhaps, a little unfortunate that he, having altered his position and assumed a political instead of a medical one, rendered himself somewhat liable to be treated as a non-professional man; and in referring to his life some remarks were made in the Journal which, perhaps, I may say I regret having been made as applied to a medical man. Yet there is this excuse, that at the time those remarks were made, or rather before this gentleman's death, he had virtually left the profession and become a layman, and it was upon him in that capacity that the remarks were made. However, the editors of the Journal propose that I, as your President, with your permission, should answer this letter and state, as I shall do most unreservedly, that it was farthest from their thoughts to say a word to reflect upon any man who either was then, or had been a member of our profession, or associated in any way with us. We are quite of accord as to the way in which the letter should be answered. I will, therefore, with your permission, take upon myself to answer the letter, and put the matter straight with our American friends.

*Dr. Tuke.*—I shall now read the Report of the COMMITTEE APPOINTED TO REVISE THE LAWS OF THE ASSOCIATION.

The Committee appointed at the Annual Meeting, in 1863, to revise the Rules of the Association, beg to submit herewith the revised Rules, which after much deliberation they unanimously recommend for adoption to this Meeting.

## RULES OF THE ASSOCIATION.

1. Name.—That the name of the Association be the “*Medico-Psychological Association.*”
2. Objects.—That the objects of this Association be the improvement of asylums and hospitals for the insane; the acquisition and diffusion of a more extended knowledge of insanity and its treatment; and the promotion of a free communication on these subjects between the Members.
3. Members.—That the Association consist of medical officers of hospitals and asylums for the insane, public and private, and of legally qualified medical practitioners interested in the treatment of insanity.
4. Election of Members.—That the election of Members take place by ballot at the annual meetings, a majority of two thirds of those present being required for the election of each candidate.
5. Annual Subscription.—That each Member pay an annual subscription of one guinea, the subscription to be due in advance on the 1st of July in each year; the accounts to be made up to the 30th of June.
6. Arrears.—That any Member in arrear of his subscription more than twelve months after the expiration of the year for which it is due, and more than three months after application by the Treasurer for the same, shall cease to be considered a Member of the Association; provided no reason satisfactory to the annual meeting be assigned for the non-payment of such arrears.
7. Expulsion.—That a general or special meeting shall have the power by a majority of three fourths of those present, to remove from the list of the Association any Member whose name is submitted by the Council with that object.
8. Honorary Members.—That gentlemen, whether of the medical profession or otherwise, who are distinguished by the interest they take in the treatment of the insane, be eligible for election as honorary Members, the election to be by ballot as in the case of ordinary Members; at least a month's notice having been given of the names to be proposed to the Secretary, who will append them to the circular by which the Annual Meeting is summoned. The recommendation for each honorary Member must be signed by at least six Members of the Association.
9. Officers.—That the Officers of the Association consist of a President, Treasurer, General Secretary, a Secretary for Scotland, a Secretary for Ireland, an Editor or Editors of the Journal, and two Auditors, who shall be elected at each annual meeting; balloting papers being used in such election for the appointment of President.
10. President.—That the President for the year enter on his duties at each annual meeting, and that his successor be appointed before the meeting separates.
11. Other Officers.—That the Treasurer and Secretaries, Editor or Editors of the Journal, and one Auditor, be eligible for re-election.
12. Annual Meetings.—That an annual meeting of the Association be held yearly in July, or the first week of August; such meetings to be called both by advertisement and circular to each Member, giving at least four weeks' notice.
13. Council.—That the officers of the Association, with the President elect, the President of the past year, and eight other Members, do constitute the Council of the Association. The eight ordinary Members shall be appointed by the annual meeting, two of the members retiring by rotation each year, but being eligible for re-election.
14. Special Meetings.—That the President, on the requisition of fifteen Members of the Association, shall have authority to call a special meeting, of which notice shall be given in the usual way, and at which, only the question or questions stated in the requisition shall be discussed and determined.
15. Place of Meeting.—That the annual meeting be held in London, or, if so agreed at the preceding meeting, in Scotland or Ireland, or in some provincial town or city.

16.—Adjournment of Meetings.—*That the annual or special meetings may be adjourned to a second or third day, if a majority of those present so decide.*

17. Order of Business.—*That after the minutes of the preceding meeting have been read, and the ordinary business transacted, reports from Members appointed to prepare the same, and other papers and communications shall be received, and free discussion invited on all topics connected with the objects of the Association. Each Member to be allowed to introduce one Visitor at the meeting. A report of the proceedings of each meeting to be published in the Journal of the Association.*

18. Finances and Journal of the Association.—*That after the payment of the ordinary expenses of the Association, the surplus funds shall be appropriated in aid of the Journal; the accounts of the Editor or Editors of the said Journal and of the Treasurer of the Association shall be examined by two Auditors, who shall report to each annual meeting. Each ordinary Member of the Association to be entitled to receive the Journal without further payment.*

19. Alteration of Rules.—*That any Member wishing to propose any alteration in, or addition to the rules, do give notice of his intention at a previous annual meeting, or two months' notice to the Secretary, who shall inform each Member of the Association of the same, in the circular by which such meeting is called.*

(Signed)

JOHN THURNAM.

JOHN KIRKMAN.

C. L. ROBERTSON.

JAMES GEO. DAVEY.

EDGAR SHEPPARD.

H. TUKE, Hon. Sec.

ROYAL COLLEGE OF PHYSICIANS;

July 13, 1865.

In the discussion which followed, various slight alterations and verbal amendments were recommended and adopted; and, amongst other amendments, it was proposed by Dr. Gardiner that the Association should be open to all legally qualified medical practitioners.

*Dr. Arlidge.*—In seconding that proposition, I am going to suggest that it should be extended further. As you alter the name of the Association from “The Association of Medical Officers of Asylums and Hospitals for the Insane” to “Medico-Psychological,” it seems to throw the Association open to any one who may wish to join. I do not see why we should confine ourselves to medical men. It would be an advantage to us to have associated with us lawyers or barristers who take an interest in the question of lunacy. I do not make any motion upon the subject, but only throw this out as a suggestion, that it may be taken into consideration hereafter. It was brought to my mind by the name of some gentleman who was proposed today connected with the Post Office. I doubted whether he was a medical man at all.

*Dr. Robertson.*—Yes, he is a medical officer.

*Dr. Monro.*—What is the proposed alteration? Should it not be put on record? I beg to call the attention of the meeting to the fact that the proposer and seconder did not exactly refer to the same subject. The proposer advises that the Association shall be open to all medical men, and the seconder rather recommends that it shall be open to all men who take an interest in the subject. I think the proposer and seconder must both agree.

*Dr. Gardiner.*—By this second rule it seems imperative that every member shall be engaged in the treatment of insanity. What I wish to submit to the meeting is that this Association shall be open to all legally qualified medical practitioners.

*Dr. Robertson.*—I beg to second Dr. Gardiner's motion.

*Dr. Arlidge.*—I did second that, but I threw in some additional observa-

tions in reference to the alteration of the name, a suggestion that might be carried out at some future time, if you thought fit to admit others than medical men into the Association.

*Dr. Monro.*—Why should not the whole question come forward?

*The President.*—The proposition of Dr. Gardiner is, I think, unexceptionable, and I am disposed to think the same of the proposition of Dr. Arlidge. It does appear to me to be very desirable now to consider the question whether we should limit the Association to medical men. I shall be glad to hear the opinion of other members on this subject. As we are making a new rule, we should make it as comprehensive as possible. If there are any reasons against the proposition, now is the time for them to be brought forward.

*Dr. Maudsley.*—At the present time the Association is not confined to medical men. We have voted amongst the honorary members some who are not medical men.

*The President.*—Our rule says they shall be medical men.

*Dr. Tuke.*—That rule applies to ordinary members only.

*The President.*—Dr. Arlidge contemplates the admission of non-professional men into the Association. It appears to me that is a matter well worthy of consideration, and that this is the proper time to consider it.

*Dr. Gardiner.*—I think, Mr. President, your suggestion is a correct one, and I therefore wish to propose that membership of the Association be limited, not only to all legally qualified medical practitioners, but to all those persons who will, we think, take an interest in our speciality, whether medical or non-medical.

*Dr. Monro.*—Men, of course?

*Dr. Duncan.*—I submit, with all deference to the gentlemen who have spoken on this question, that if non-medical persons are to be admitted as members of our Society, the term psychological should be substituted for medico-psychological, because that term would imply that all the members of our body are medical men. I think there is something in that.

*Dr. Maudsley.*—I have a very strong opinion against withdrawing the medical character of the Association, and converting it into a psychological society. We could have no unity of aim or definite existence of that kind. If we alter our title from the Association of Medical Officers of Asylums and Hospitals for the Insane, we should keep in view in some way the special character of our Society and our special aim, and not throw it into a general society. Therefore, I propose that we should retain the title "Medico-Psychological," and I, for one, should refuse to vote for the admission of any but regular practitioners.

*Dr. Monro.*—Is it not advisable that the chaplains of county asylums should be allowed to become members of the Association? I think we might receive a great deal of benefit from them.

*Dr. Down.*—Persons who have the care of insane people might assume as a qualification the title Members of the Medico-Psychological Association; and if they were not medical men it would, to the uninitiated, give a qualification which is not valid.

*The President.*—There is something in that objection, but I think we may always meet that by the power we propose to take to exclude any member from our Association who makes any improper use of his membership.

*Dr. Down.*—If they were unscrupulous enough to do what I suggest, they would be unscrupulous enough to use the name after they were excluded.

*Dr. Monro.*—Is there any rule which interferes with a non-medical man coming into the Association?

*The President.*—The rule says "That the Association do consist of medical officers of hospitals and asylums for the insane, public and private, and of

legally qualified medical practitioners otherwise engaged in the treatment of insanity."

*Dr. Gardiner.*—I think, on second consideration, my original proposition had better be taken first; therefore I beg to propose that the membership of the Association be limited, not only to "legally qualified medical practitioners otherwise engaged in the treatment of insanity," but to all legally qualified medical practitioners.

*Dr. Monro.*—That is seconded by Dr. Arlidge.

*Dr. Arlidge.*—I cannot second it, with the views I have expressed.

*Dr. Robertson.*—I beg to second it.

*The President.*—You move an amendment?

*Dr. Arlidge.*—I move an amendment to the effect that the members of the Association comprise, not only those who are engaged in the practice of medicine, but others who are interested in psychology or in the practice of lunacy. We have always an opportunity of ascertaining.

*Dr. Hitchman.*—I beg to second the proposition of Dr. Arlidge, and I think his amendment is only carrying out what you have already done in the election of honorary members of the Association. You have elected Mr. Wyatt, Chairman of the Committee of Colney Hatch, who does not fall within the category of ordinary members, nor need he as an honorary member, but the suggestion of Dr. Arlidge places such election more in harmony with the general laws of the Association. I think we should stand much better with the general public if we were to admit some other members than medical men into our body; the public would not then look upon us with that suspicion which, unfortunately, they do now, and it would be very useful to us if legal men, barristers, attorneys, and others, would join us. We should be interested, I think, in hearing the special views they take upon interesting subjects of jurisprudence in relation to insanity; and I think they would gain a good deal by listening to our observations, and in looking at the subject of insanity from our point of view. Therefore I have very great pleasure in seconding the amendment.

*Dr. Tuke.*—I am very unwilling to appear to speak on an illiberal side of the question, but I do strongly deprecate the adoption of the amendment of Dr. Arlidge, and for this reason—at present we stand as a medical body; we are meeting here in the College of Physicians; we propose to meet next year in the College of Physicians at Edinburgh. We have had some of the leading physicians of the country as our presidents, and I do believe we should weaken the strength of our Association, which is every day gaining ground, if we admitted lay members. We cannot possibly get from them any information as to our great object—the improvement of the treatment of the insane. We do not care about their opinions, for this reason—they do not understand the question, and they cannot add to our deliberations any weight whatever; and, moreover, I think that our resolution last year, which was unanimously carried, would have lost its weight very much if it had been associated with a number of counsel and attorneys, and other lay members, who, it is certain, would have opposed it, and merely because they know nothing practically of the subject. To introduce into our Society a number of men who know nothing at all about our subject will not add to our usefulness.

*Dr. Monro.*—I think there is a great deal in what Dr. Arlidge has said, but it is advisable that we should progress in this matter by degrees, perhaps. The proposition of Dr. Gardiner is, I think, a step in the right direction; and if we are satisfied with that this year, it will be best to adopt it, and Dr. Arlidge can make a motion for his proposal to come forward in a succeeding year. I believe a good many members of the Association will take a great interest in the proposal, but it is certainly advisable to

progress by degrees and adopt Dr. Gardiner's proposal on the present occasion.

*Dr. Arlidge.*—In reference to Dr. Monro's remarks, I may observe that we are on a question of rule, and if we alter it we had better alter it as we wish it permanently to be, and not have to revise it again next year. Dr. Tuke made a remark to the effect that all other but medical men are ignorant of insanity and the laws relating to it.

*Dr. Tuke.*—The treatment of it.

*Dr. Arlidge.*—The treatment of it. But that is not the only purpose of our Association; it is a protective association, for protecting the interests of those engaged in lunacy. We have constantly legal questions arising, and if we had a certain number of lawyers amongst us we could more satisfactorily discuss those questions. Certainly, we should be able to put any proposition for the amendment of the law before the public with more confidence and with a better chance of getting a hearing from the public than we do at present. As the Society exists now, it is just a special society of those who are engaged in insanity; we are supposed to have special interests, and to propose alterations in behalf of those special interests apart from the general welfare of the country. But, if you throw the Association open in the way I propose, and admit others who are not engaged in asylums, or in connection with asylums, not only medical men, but others, the Association will take a much higher stand. It was on these grounds that I proposed the amendment.

*Dr. Gardiner.*—In the first place, I think it extremely unlikely that any gentleman who is not a member of the profession will apply for membership. If he should do so, and if we should see that he has the interest of the question at heart, it is always open to us to admit him as an honorary member; therefore I think the amendment is unnecessary.

*Dr. Mundy.*—I wish to call the attention of the Association to our two sister associations, the French and the German, one of which has been in existence more than twenty years—longer than the English Association. Our experience in Germany shows that non-professional men are rather useless in such associations, hindering their labours, and causing a great loss of time, by mixing up matters not at all within the object of such an association. In France the system was changed in this way only—that the French Medico-Psychological Society admits only members who are high in standing in mental science, but nobody else; and some of them are of such high standing that they are of great utility. If the membership were confined to persons of this description in England it would be of the greatest utility for our Association. In Germany we are much more rigorous; we do not admit any other than those engaged in our speciality. The society has been in existence about thirty years, and works very well. Without giving any opinion upon the proposal which has been made, I only take the liberty of informing you of the constitution of our two sister associations.

*The President.*—It appears to me a question well worthy of serious consideration whether, bearing in mind the great jealousy that exists in the public mind towards us, we should not disarm a good deal of that jealousy by having associated with us, especially, a few lawyers. I have no very strong opinion about it; it is a new idea, but one, I think, deserving of very careful consideration, because I do not apprehend that the dangers that are contemplated are likely to be very great, in admitting amongst us a few of those who really take sufficient interest in the subject to wish to become members. I do not apprehend that there would be any very large number.

*Dr. Hitchman.*—I may just observe that we have the protection of the ballot.

*The President.*—Quite so. I should be sorry to see the question lightly thrown on one side.

*Dr. Maudsley.*—We can give it a year's consideration.

*Dr. Shepherd.*—I am inclined to think by adopting the suggestion we should destroy the character of the Association. Dr. Tuke very ably put that forward, and I am prepared to endorse all he said upon the subject. Both the Committees of the House of Commons and the Commissioners in Lunacy really, in a measure, look up to us as a body worthy of consultation. If we mix up members of the legal profession, and laymen generally, with ourselves, we shall destroy very much our special character. I have myself the largest views with regard to admission, and I should be extremely sorry to exclude any one, but I think we are bound to bear in mind what we really are, and for what purposes we were constituted.

*The President.*—If no other member has any observation to make, I must put the amendment to the meeting.

*Dr. Arlidge.*—It will read in this way—"That the Association do consist of medical officers of hospitals and asylums for the insane, public and private, and of legally qualified medical practitioners, and of other persons who feel interested in the subject of psychology."

*The President.*—I must ask you, gentlemen, all to vote on this occasion; it is an important one.

[The amendment was then put to the meeting, when there appeared—

|                         |            |
|-------------------------|------------|
| For the amendment ..... | 6          |
| Against .....           | 12         |
| Majority .....          | <u>6.]</u> |

*The President.*—The original motion proposed by Dr. Gardiner and seconded by Dr. Robertson is—"That the Association consist of medical officers of hospitals and asylums for the insane, public and private, and of all legally qualified medical practitioners." The rule is only altered, in fact, in making it include those who are engaged otherwise than in the treatment of insanity.

[The resolution was carried unanimously.]

*Dr. Thurnam.*—I beg to suggest that the Committee appointed to revise the rules be requested to remain in office for the purpose of seeing the rules put in print, so that the onus of deciphering this paper be not entirely left with the Honorary Secretary, as I think it may be rather a difficult task, and some questions might arise upon it afterwards.

This motion was seconded by *Dr. Robertson*, and carried unanimously.

The meeting was then adjourned till Three o'clock.

**AFTERNOON MEETING.** *The President.*—Perhaps, gentlemen, before proceeding with our business, you will allow me to propose to you another name to our list of new members—Dr. Haviland. I do not know whether it is necessary to go to the ballot. I may, perhaps, put it to the meeting whether it is your wish that Dr. Haviland should be admitted a member of the Association.

Carried unanimously.

*Dr. Tuke.*—I have to announce the presentation since last year of several reports from the various medical superintendents of asylums, and amongst the rest the three bound volumes of complete Colney Hatch 'Reports,' with a letter from the clerk of the Visitors to me.

**"MIDDLESEX COUNTY LUNATIC ASYLUM, COLNEY HATCH."****"33, MILNER SQUARE, ISLINGTON ;"****"23rd Nov., 1864."**

**"SIR,—At the request of Mr. Wyatt, the Chairman of the Committee of Visitors of this Asylum, I beg to forward to you, for the use of the Society, a set of the Annual Reports from the opening of the asylum to the end of last year.**

**"I am, Sir,****"Your faithful servant,****"JOHN S. SKAIFE, Clerk to the Visitors.****"DR. TUKE Hon. Sec.,****"Association of Med. Officers of Asylums."**

I have also a set of bound reports from Dr. Kirkman and Dr. Murray Lindsay. I move that the thanks of the Association be presented to these gentlemen, and that I may be authorised to write to Mr. Wyatt or the clerk to the Visitors the thanks of the Association.

The motion was carried unanimously.

Dr. Tuke then read the following **REPORT OF THE COMMITTEE UPON ASYLM STATISTICS.**

*At the Annual Meeting of this Association in 1864, it was resolved, "That a Committee of three, viz., Dr. Robertson, Dr. Thurnam, and Dr. Maudsley, be appointed to draw up a series of tables, and a form of register which might be the basis of a uniform system of asylum statistics; that these tables be submitted to the Commissioners when drawn up, and that they be asked to sanction and promulgate them." The Committee thus appointed report as follows:*

1. *That twenty-three years ago this subject engaged the attention of the Association, and a form of register (which the committee annex to this report) was adopted at the annual meeting held at Lancaster, in 1842, which contained all the information deemed necessary for the purpose of asylum statistics. This form, however, on which Dr. Thurnam in particular, bestowed much pains, never came into very general use, having been shortly afterwards, viz., in 1845, almost entirely superseded in practice by the registers of admissions, discharges, and deaths, required under the Acts of 8 and 9 Vict. c. 100 and c. 126; which were re-enacted with slight modification, by the Acts of 16 and 17 Vict. c. 97, and c. 100; and which Acts are still in force.*

*In a very few instances, as at the Wilts County Asylum, the Association-register, in addition to those required by the Act of Parliament, has been regularly kept. There can, indeed, be no doubt of the utility of this register, as affording the means for the compilation of statistics more full and extended than those which can be deduced from the legal register.*

*The Committee are not at present prepared to recommend to the Association the printing of a second and revised edition of its register (a step which would involve a considerable outlay), unless a sufficient number of the members pledge themselves to its adoption and use.*

*The Committee trust, however, that whenever the time may arrive for the revision and consolidation of the Acts, under which asylums, hospitals, and licensed houses are regulated, the opportunity may be taken, with the approbation and sanction of the Commissioners in Lunacy, to revise the legal registers, by the omission of a few columns which to the Committee appear superfluous, and by the introduction of a few others required for the preparation of medico-statistical tables.*

2. *Asylum statistics may be divided into three distinct heads :*

1. *Medical statistics.*
2. *Financial statistics.*
3. *Domestic statistics.*

The Committee, while fully recognising the value of a uniform series of asylum statistics in illustration of each of these departments of asylum management, yet propose on the present occasion to confine their suggestions to the first and more important branch, viz., that of Asylum Medical Statistics.

3. The Committee have carefully examined the various and varying tables in the several asylum reports. They are of opinion that the information more immediately necessary for medical statistics, may be given in the tables, forms of which they annex to this report.

Table I gives the numbers of admissions, re-admissions, discharges, and deaths, with the average numbers resident during the year; the sexes being distinguished under each head.

Table II gives the same results for the entire period the asylum has been in operation.

Table III furnishes a history of the yearly results of treatment since the opening of the asylum.

The table also embraces a column for the mean population, or average numbers resident in each year. In other columns are shown for each year the proportion of recoveries calculated on the admissions; and the mean annual mortality, or the proportion of deaths, calculated on the average numbers resident. It is of the first importance that these two principal results under asylum treatment, when given, should be calculated on a uniform plan, and according to the methods here pointed out.

Table IV gives a history of each year's admissions, how many, for example, of the patients admitted, say in 1855, have been discharged as cured, how many have died, and how many remain in the asylum in 1865.

The value of this table in regard to the vexed question of the increase of insanity is evident. The table is adopted from the Somerset Asylum Reports.

Table V shows the causes of death classified under appropriate heads. This form is adopted from the reports of the Commissioners in Lunacy for Scotland, with some addition and modification. It appears sufficiently detailed for statistical purposes.

Table VI gives the length of residence in the asylum of those discharged recovered, and of those who have died during the year.

The committee are of opinion that the introduction into all the asylum annual reports of the few simple tables here referred to, the compilation of which would not be very onerous—would be a most desirable proceeding, and would supply in a uniform manner the main facts required for statistical comparison. They accordingly recommend their adoption to those members of the Association by whom they have not hitherto been employed.

The tables recommended, however, are regarded by the committee only in the light of a principal instalment of those which are desirable. Their use will not, of course, preclude that of other tables, according to the views which may be entertained by the different superintendents. Hereafter, it may be expedient that the committee should report as to the propriety of recommending to the members the assimilation of other tables to a common standard.

The Committee annex to their report the following documents:—

1. The forms for statistical tables which they now recommend.
2. The form of register adopted by the Association in 1842.
3. Copy of a paper by C. Lockhart Robertson, M.D., on "A Uniform System of Asylum Statistics," read at the meeting of the Association, July 5th, 1860.

(Signed)

JOHN THURNAM.  
C. L. ROBERTSON.  
HENRY MAUDSLEY.

ROYAL COLLEGE OF PHYSICIANS;  
July 13th, 1865.

*Asylum Medical Statistics.*TABLE I.—*Showing the Admissions, Re-admissions, Discharges, and Deaths, during the year 1865.*

|   | Male. | Female. | Total. |
|---|-------|---------|--------|
| In the Asylum Jan. 1st, 1866 . . . . .  |       |         |        |
| Admitted for the first time during the year . . . . .   | Male. | Fem.    | Total. |
| Re-admitted during the year . . . . .   |       |         |        |
| Total under care during the year . . . . .  |       |         |        |
| Discharged or removed—  |       |         |        |
| Recovered . . . . .   |       |         |        |
| Relieved . . . . .  |       |         |        |
| Not improved . . . . .  |       |         |        |
| Died . . . . .  |       |         |        |
| Total discharged and died during the year . . . . .   |       |         |        |
| Remaining in the Asylum, Dec. 31, 1865 (inclusive) of absent on trial— males and females) . . . . . |       |         |        |
| Average numbers resident during the year . . . . .  |       |         |        |

TABLE II.—*Showing the Admissions, Re-admissions, Discharges, and Deaths, from the opening of the Asylum to the present date, December 31st, 1865.*

|   | Male. | Female. | Total. |
|---|-------|---------|--------|
| Persons admitted during the period of years |       |         |        |
| Re-admissions " . . . . .                   |       |         |        |
| Total of cases admitted . . . . .           |       |         |        |
| Discharged, or removed—                     | Male. | Fem.    | Total. |
| Recovered . . . . .                         |       |         |        |
| Relieved . . . . .                          |       |         |        |
| Not improved . . . . .                      |       |         |        |
| Died . . . . .                              |       |         |        |
| Total discharged and died during the years  |       |         |        |
| Remaining, Dec. 31, 1865 . . . . .          |       |         |        |
| Average numbers resident during the years   |       |         |        |

TABLE III.—*Showing the Admissions, Discharges, and Deaths; with the mean Annual Mortality and proportion of Recoveries per cent. of the Admissions, for each year since the opening of the Asylum.*

TABLE IV.—*Showing the History of the Asylum, with the Discharges and Deaths, and the Annual Admissions since the opening of the Asylum, with the Numbers of each year remaining on the 31st December, 1865.*

TABLE V.—*Showing the Causes of Death during the year.*

| Causes of Death.*   | Male. | Female. | Total. |
|---|-------|---------|--------|
| <b>CEREBRAL OR SPINAL DISEASE—</b>  |       |         |        |
| Apoplexy and Paralysis . . . . .  |       |         |        |
| Epilepsy and Convulsions . . . . .  |       |         |        |
| General Paralysis . . . . .   |       |         |        |
| Maniacal and melancholic exhaustion or decay .                                  |       |         |        |
| Inflammation and other disease of the Brain,<br>softening, tumours, &c. . . . . |       |         |        |
| <b>THORACIC DISEASE—</b>  |       |         |        |
| Inflammation of the Lungs, Pleuræ, and Bronchi                                  |       |         |        |
| Pulmonary Consumption . . . . .   |       |         |        |
| Disease of the Heart, &c. . . . .   |       |         |        |
| <b>ABDOMINAL DISEASE—</b>   |       |         |        |
| Inflammation of the Stomach, Intestines, or<br>Peritoneum . . . . .             |       |         |        |
| Dysentery and Diarrœa . . . . .   |       |         |        |
| Fever . . . . .   |       |         |        |
| Erysipelas . . . . .  |       |         |        |
| Cancer . . . . .  |       |         |        |
| General Debility and Old Age . . . . .  |       |         |        |
| Suicide and Accidents . . . . .   |       |         |        |
| Total . . . . .   |       |         |        |

\* Add in foot-note the number ascertained by *post-mortem examination*.

TABLE VI.—*Showing the Length of Residence in those discharged Recovered,  
and in those who have Died during the year.*

| Length of Residence.         | Recovered. |         |        | Died. |         |        |
|------------------------------|------------|---------|--------|-------|---------|--------|
|                              | Male.      | Female. | Total. | Male. | Female. | Total. |
| Under 1 month . . . . .      |            |         |        |       |         |        |
| From 1 to 3 months . . . . . |            |         |        |       |         |        |
| " 3 , 6 " . . . . .          |            |         |        |       |         |        |
| " 6 , 9 " . . . . .          |            |         |        |       |         |        |
| " 9 , 12 " . . . . .         |            |         |        |       |         |        |
| " 1 , 2 years . . . . .      |            |         |        |       |         |        |
| " 2 , 3 " . . . . .          |            |         |        |       |         |        |
| " 3 , 5 " . . . . .          |            |         |        |       |         |        |
| " 5 , 7 " . . . . .          |            |         |        |       |         |        |
| " 7 , 10 " . . . . .         |            |         |        |       |         |        |
| " 10 , 12 " . . . . .        |            |         |        |       |         |        |
| " 12 , 15 " . . . . .        |            |         |        |       |         |        |
| " 15 , 20 " . . . . .        |            |         |        |       |         |        |
| " 20 , 30 " . . . . .        |            |         |        |       |         |        |
| " 30 , 40 " . . . . .        |            |         |        |       |         |        |
| Total . . . . .              |            |         |        |       |         |        |

*Dr. Thurnam.*—I presume, sir, I may venture to make a suggestion upon the reading of this report, that all that is necessary at the hands of this Association is, that the report, if approved, be adopted by the Association. It is obvious that we can only recommend; we cannot resolve that it shall be used. I beg to propose that the report be adopted and printed.

*Dr. Arlidge.*—I have great pleasure in seconding the adoption of the report. I understand from Dr. Tuke that a table is to be introduced (Table IV) which I have long wished to see—a table that I only see in Dr. Boyd's Reports, and in the Reports of Mr. Ley of the Oxford—a table showing the gradual dying out or recovery of the patients in different years. For instance, taking the year 1850, the falling off or the dropping off by death of the patients from year to year. You have thus a history which you do not get from the present tables, where you have only the statement that so many have been admitted, and so many have gone out cured. You cannot base any satisfactory statistics upon these tables. I have been for some time engaged in working out statistical tables, and I have got a great deal of matter together, but I am sorry to say that only the reports of those two asylums have supplied me with these necessary particulars.

The Report of the Committee on the Asylum Statistics was unanimously adopted.

*Dr. Robertson* then read THE REPORT OF THE COMMITTEE ON THE SUPER-ANNUATION CLAUSE.

Report of the Committee on the Superannuation Clause (*12th section of the Lunatic Asylum Amendment Act, 1862.*)

*On the motion of Dr. Kirkman,\* seconded by Dr. Robertson, it was, at the*

\* SUPERANNUATION ARRANGEMENTS.—Dr. Kirkman proposed—“That a committee be appointed from this Association, with the definite object of obtaining a reversal of the latter portion of the 12th section of the Lunatic Asylums Amendment Act, and to press for legislative sanction to satisfactory superannuation arrangements.” The section of the Act to which he referred was as follows:—“Provided that no annuity by way of superannuation, granted by the visitors of any asylum under the provisions of this Act, or of the Lunacy Act, chapter 97, shall be chargeable on or payable out of the rates of any county, until such annuity shall have been confirmed by a resolution of the justices of such county in general or quarter sessions assembled.” The concluding proviso he regarded as most cruel, negativing the use of the clause altogether. Speaking personally, having been connected with public asylums for thirty years, he could not well be refused a pension, but to secure it it would be necessary that the subject should be discussed at four sessional meetings. He had no doubt that he could command the undivided interest of the whole of his house committee; but objectionable remarks and slurs might be thrown out at the sessional meetings, which would be extremely painful. Any one fitted to be an asylum officer must necessarily possess a sensitive mind, and the harsh remarks occasionally made in magisterial sessions would be likely to wound his feelings. He thought the enactment ought to be compulsory, and the objectionable clause removed. At the present time a beloved member of the Association was suffering from physical injury received in the discharge of his duty, and it would be a most unfair thing if a gentleman in his position were subjected to unpleasant remarks about his superannuation allowance.

Dr. Robertson seconded the resolution, and said that, as the section originally stood, the question of superannuation was left to the visitors; but a very active member of the House of Commons succeeded in committee in getting the objectionable rider added, which literally made the preceding portion worthless. Thus, he had no doubt that any reasonable reward for his services in Sussex would be gladly given by the committee of visitors, but he should exceedingly object to be made the subject of discussion at sessional meeting in the two divisions of the county. He

*Annual Meeting of this Association for 1863, resolved "to appoint a Committee with the definite object of obtaining a reversal of the latter portion of the 12th section of the Lunatic Asylum Amendment Act, 1862, and to press for legislative sanction to satisfactory superannuation arrangements."*

*This Committee have to report that on the 2nd of December, 1863, they had an official interview with the Commissioners in Lunacy at their offices in Whitehall Place, on the question thus entrusted to them by the Association. They submitted to the Commissioners the annexed memorandum, which was subsequently inserted in the Journal of the Association for January, 1864.*

*At the meeting of this Association in July, 1864, this Committee was re-appointed in order further to consider this important question.*

*They now beg to report :—*

*1. That after careful consideration of the whole question and communications with several superintendents of the county asylums this Committee are of opinion that no settlement of the superannuation clause will be found satisfactory which does not—as throughout the military and civil services of the Crown—CONFER THE RETIRING PENSION AS A MATTER OF RIGHT. With the other provisions of the 12th section of the Lunatic Amendment Act, 1862, this Committee are quite satisfied, and they regard as just and liberal that arrangement by which the period of service has been reduced from twenty years to fifteen years, and the proviso made that the value of the lodgings, rations, and other allowances, are to be had regard to in fixing the retirement. All that is farther necessary is, that the claim for two thirds of the salary and allowances after fifteen years' service, and fifty years of age, be granted as a right, to be charged on the county rate, at the expiration of the period of service.*

*2. That as in the last report of the Commissioners in Lunacy an indication of early farther legislation in lunacy is given, they should be authorised to confer farther with the Commissioners hereon.*

*3. That, in order to watch such possible legislation, this Committee be re-appointed and authorised to employ, if necessary, legal aid to procure the revision of the 12th section of the Act of 1862, in the manner here indicated.*

(Signed)

JOHN KIRKMAN.  
C. L. ROBERTSON.  
EDGAR SHEPPARD.  
HENRY MAUDSLEY.

ROYAL COLLEGE OF PHYSICIANS;  
July 13th, 1865.

The report of the superannuation committee was unanimously adopted, and the committee reappointed.

*Dr. Boyd* moved the following resolution :—

*" THAT IN THE OPINION OF THIS MEETING, THE TREATMENT OF THE INSANE NOW IN WORKHOUSES IS NOT SATISFACTORY, AND THAT IT IS DESIRABLE TO HAVE THE CARE OF ALL THE INSANE POOR OF THE COUNTIES TRANSFERRED TO THE VISITORS AND SUPERINTENDENTS OF THE COUNTY ASYLUMS."*

*Dr. Boyd.*—The resolution on the agenda paper which I have to propose to

had known the most trifling matters, involving the expenditure of £50, made the subject of lengthened discussion there; and if a proposal were made to allow a medical superintendent three or four hundred a year, most painful remarks to the feelings of a gentleman would be made as to his physique, his general state of health, whether more work could not be ground out of him, and the like. He had no doubt that great benefit would be derived by the appointment of a small committee to consider the question carefully, and communicate with the Commissioners and with some members of the House of Commons on the subject.

The following members were appointed :—Dr. Kirkman, Dr. Sheppard, Dr. Robertson, and Dr. Maudsley.—(Annual Meeting of the Association, 1864.)

this meeting relates to so large a number of helpless beings, and is so important, that I wish some one more equal to the task had undertaken it.

The time of the meeting being so valuable, I shall only give a brief statement of leading facts, leaving it to the superintendents of asylums to follow up the inquiry in their districts, at the same time I would impress upon them the importance and necessity of enlisting the aid of visitors of asylums, as it will require the united efforts of every one interested in the insane poor to obtain a reform in the care of the larger number still in workhouses, under the poor law, which, according to the published returns, amounts to about one third of the insane poor, above 9000, the numbers gradually increasing, who are in most instances treated as ordinary paupers on scanty fare, in cheerless, ill-furnished wards, devoid of the comforts now supplied to the insane so liberally in asylums.

I do not mean for a moment to question the propriety of rendering workhouses as little attractive as possible to able-bodied paupers. In the country especially the system has worked well, application from such for admission have been very rare for years past, and these institutions are now comparatively empty, some of them built for 400 have now only 80 or 90 occupants. These are children, the aged, the infirm, and the imbecile; when any of them become troublesome, as often happens, they are sent to the asylums as insane, and there they become permanent residents, aiding very materially to fill those institutions.

Within the last fifteen years the insane in England have been doubled in number. So great has been the increase that foreign authors state (as you are aware) that the inhabitants of this country are more liable to insanity than any other civilized state.

Under the existing laws there is every facility and inducement for the removal of troublesome paupers to county asylums; this I have stated repeatedly in medical journals and in annual reports, and also that it should be compulsory to set apart wards in workhouses for the sick and chronic cases of insanity; that such wards should be placed under visitors, and that with the assistance of superintendents they should be empowered to remove persons to or from asylums as their cases might require. For this purpose it might be advisable to extend the chargeability of insane paupers and criminals from unions to counties.

It is unnecessary for me to give instances of patients being brought into asylums in a dying state, as I see such cases mentioned in nearly all the asylum reports.

The object of the resolution is to provide all necessaries with skilled supervision for the sick and infirm in workhouses, near their homes, and thereby obviate the necessity of sending such cases to asylums already overcrowded. I have, in conclusion, to express a hope that the meeting will not separate before unanimously adopting the resolution.

*Dr. Robertson.*—I beg to second Dr. Boyd's resolution. It is a subject to which I ventured last January in a paper in *the Journal* to call the attention of the Association. I brought forward there the proposal now also made by Dr. Boyd, that the entire care of the insane poor throughout the country, instead of being, as it is now, under the guardians, should be placed under the charge of the visiting justices of the county asylums, and that the superintendents of the county asylums should have the power of visiting those patients either in the unions or where the patients are boarded out with their friends—that the whole of the insane poor of the county should be registered on the county asylum books, and be placed according to their state of mind either in the county asylum, in the cottages where they now are boarded, or in the wards of the union; giving the visitors the power of fixing the scale of maintenance in the cottages, and the diet and attendance,

and so on, in the union houses, thus transferring the whole care of the insane poor to the visiting justices. This resolution of Dr. Boyd is a very important one, in regard to the welfare of the insane poor; and after his remarks, I think it will hardly be felt necessary for me to do more to-day than now second his resolution.

*Dr. Davey.*—I am very glad, indeed, that Dr. Boyd has brought this subject to our attention to-day. I think the medical treatment of the insane in our workhouses is very bad and very objectionable. Of course, my experience at the present time is *nil*, but in times gone by my experience, in regard to the condition of the insane in workhouses, has been very considerable. During my connection with the Hanwell and the Colney Hatch Asylums, I was particularly struck with the wretched state of all the patients as they were received from all the union houses. I was perfectly convinced from seeing them, and in large numbers too, not only year by year, but month by month, I might almost say week by week, that there was something very defective in the treatment of the insane in all our workhouses. I believe that among the lower classes of society, if there is one case of insanity more frequent than another, it is want of wholesome and sufficient food, and particularly in so far as that fact obtains in union houses, I assure you it is something shocking. You all know it. I speak in the presence of men of experience. To witness the miserable objects which are received into Hanwell and Colney Hatch Asylums from the union houses! They have evidently not only been very badly treated, but they have been half starved. Now what would be the effect of this semi-starvation on the disordered mind? You, gentlemen, know very well the effect would be to aggravate all the symptoms of insanity. The poor wretched objects that I have received over and over again at Hanwell and at Colney Hatch, what did they require for the amelioration of the active symptoms of disease, but good and sufficient diet, wine, bottled beer, and so on, showing where the cause lay, and what were the proper remedies. I think the matter which has been brought to our attention by Dr. Boyd, is a subject of the very first importance, and I hope it will fix itself in our minds, and that something good and practical will result.

*Dr. Maudsley.*—While I entirely sympathise with Dr. Boyd in the motion that he has put on the paper, I can scarcely do so in the way in which he wishes it carried out. For instance, it might be a very desirable thing, and no doubt it is, to have the insane poor transferred to the visitors; but the practical and effectual way of doing that, it appears to me, would be to do away with the residence of the insane in workhouses altogether. I cannot conceive how it is possible that you can have a part of a workhouse set aside for treating insane people, and specially placed under the visiting magistrates, while the rest of the workhouse is left under the control of the guardians of the union. How is it possible, in fact, for the same officers to work satisfactorily under such divided authority—for the master of the workhouse and the surgeon to be serving two entirely different masters, who would scarcely ever agree in their views. This seems to be a practical objection, which renders it absolutely and utterly impossible that while workhouses are under the control of the guardians, as they must be, you could give to the visiting justices the control of the insane poor only. The practical and only ultimate remedy, which must come some time or other, is, that all the insane should be removed to county asylums or to private houses, if that can be done, and then they might be under the control of the visiting justices. At present, when they are under one roof, I cannot conceive it possible for the visiting justices to exercise proper control, as they must often have to do, in opposition to, and in conflict with, the guardians.

*Dr. Monro.*—It seems to me a great pity that so important a subject should

fall to the ground, and therefore I think that some amendment had better be proposed to Dr. Boyd's motion, if the motion does not meet with the general concurrence of the meeting. Of course, I fully see the difficulties and objections raised by Dr. Maudsley, but I think it a very important thing that the Association should put on record how strongly they feel the object which Dr. Boyd has at heart, although they may not exactly approve of the scheme by which he would carry it out. I have not prepared an amendment myself at this moment, but before the subject drops to the ground I think some amendment had better be made, if it seems likely that Dr. Boyd's motion will be thrown out.

*Dr. Maudsley.*—I do not object to the motion as it stands now. It was merely to the details that my observations referred.

*Dr. Monro.*—It is a motion to transfer to the visitors and superintendents of the county asylums the care of the insane poor.

*Dr. Maudsley.*—Exactly; and I do not object to the resolution, but merely to the practical manner of working it out.

*Dr. Monro.*—Then that will meet what I have to say.

*Dr. Mundy.*—While giving some credit to the motion of Dr. Boyd, I quite agree with the principles laid down by Dr. Maudsley. I have seen a great many so-called workhouses *lucus à non lucendo* in the United Kingdom. I have lately seen a great many of them in Scotland and Ireland. From my frequent visits I have come to the conclusion that undoubtedly Dr. Boyd was quite right in putting such a serious and most important motion before the meeting, but that Dr. Maudsley was at the same time much more right in the remarks which he made; and I venture to express the hope that the time will not be far distant when no insane man will be admitted into a workhouse, but will be confined in the proper place, where he may be treated according to the principles which are now adopted in the county asylums. From the last official reports of the Commissioners it appears that there are nearly 8000 insane patients in workhouses; 2000 in Scotland, and 2000 in Ireland—making a total of 12,000 insane patients in workhouses. Now, allow me to call your attention to their condition in England; they are very miserable indeed. In some of the wards it is quite shameful, it is a scandal to see these people in the workhouses; but these are exceptions to the rule. I cannot help paying a compliment to many of the medical men who are engaged in workhouses, who spend their energy in doing something for the insane wards. Some of the workhouses are indeed very excellent in their arrangements, and the wards are perfect models, but the others are just as bad as I have mentioned. These remarks refer to England. In Scotland the arrangements are very excellent indeed; and I must confess, having seen a great many asylums in Germany and France, and other parts of Europe, that in these poorhouses the condition of the insane is much better than in Italy, Spain, France, and a great part of Germany. Such facts, I believe, are worth mentioning before such an eminent meeting as the present. I forgot to mention that in Ireland the insane are in the same miserable condition, much worse than in England. My friend Dr. Robertson mentioned that he has already treated this question in a recent number of the Journal, and he has found a very simple and a very ingenious remedy. He mentioned the remedy of visiting the insane in workhouses by the magistrates and commissioners, but he proposed another plan—to build county lunatic asylums for a number of thousand patients; and if that were done, you would certainly very soon have disposed of the 8000 patients who are now in workhouses. Supposing you take as an average only 600 patients in one asylum, and you build in England eight lunatic asylums; in building these asylums you are sure to be able to remove from your workhouses all your insane, and to have them in the right place, that is, in asylums; but there are some

objections to this principle; and the principle which Dr. Robertson laid down in his paper last January, that asylums may be built to hold a thousand patients, was overruled some years ago by a great number, I may say the totality of specialists, and they said, "Do not build an asylum for so large a number of patients. If you build an asylum, the largest number you should take is from three to five hundred." Dr. Robertson says that in building asylums for a thousand patients you have quite removed every difficulty not only with regard to the workhouses, but every difficulty with regard to the increase of patients; and he quotes figures, which I will not go into to-day, as I must go very much deeper into the question of Dr. Boyd. I believe that in such a powerful and rich country as yours, where the resources are so much developed, the suggestion of Dr. Robertson might be carried out. The cost would amount to a million pounds or so, certainly. It could not be done in foreign countries; and with regard to my experience in Ireland, I may observe that it is in a very much worse state in this respect. We still find patients in gaols; and if you will refer to the Report of the Commissioners of Lunacy in Ireland—men who are working very hard to improve the condition of the insane there—you will find that nearly 500 patients are still in gaols. I have recently been visiting them, and I find their condition very horrible indeed. If the right place of insane people is in workhouses, certainly no one will believe that the right place for them is in gaols. In Ireland there has been spent during the last ten years £1,500,000 to build magnificent palaces as asylums, and still you see in Ireland 500 people confined in gaols. I say they should not have spent so much money in building places like palaces for poor people—putting them into a condition in which they have never been before. I believe that the poor man who has the misfortune to become insane has not on that account a right to become a prince in condition. It would be certainly, in my opinion, a great honour for the meeting, and perhaps also a benefit to the insane, to censure very severely the actual practice of sending insane people still to workhouses and to gaols, and to express a sincere hope that not only in England but also in foreign countries the treatment of the insane should be improved, and made more consonant with the views of our time and of practical humanity. In my opinion, gentlemen, it is not humanity to give an insane person a luxurious bed, a marble wash-stand, and such like luxuries. You should give him good food and good attendance, and relieve him, as much as possible, of one of the greatest evils—a continual sequestration; but I should like the meeting to express a wish that the restraint that is still carried out upon a population of more than 150,000 patients on the Continent, and the practicability of removing which is still denied most impertinently, not to use a more strong expression, on the Continent, will be done away with, and that they will endeavour to follow the principle of a man like Dr. Conolly, of whom they have the impertinence to say that what he has done they have done before. "*Ante Conolly ego fui,*" say the French physicians. That certainly is not the case with all of them, and I would say, *Ubi, quomodo, quando.*

*Dr. Boyd.*—This subject of the treatment of the insane in workhouses is not new to me. In 1845 I had some wards in the Marylebone Workhouse licensed for the care of lunatics, owing to the asylums in Middlesex being full, and unable to receive them. There are also wards at Clifton, at Bath, and in this neighbourhood, as well as the wards of Marylebone, St. Pancras, and Mile End, appropriated for the insane, where, I believe, they are very well treated. I do not mean at all to advocate the system of treating acute cases of insanity in a workhouse; I only speak of aged persons, and I say it is a cruel thing to have persons upwards of seventy years of age in a state of fatuity brought to an asylum, where they can possibly receive no benefit, merely because they are insane, and because they ought to be, as people

suppose, treated as insane. It would be a very hard thing, sir, if you or I, or any of us here, when we got into a state of dotage, and became troublesome to our friends, and paralytic, and got into dirty habits, and wet the beds, and all that sort of thing, should be hauled off to a madhouse and made out insane; but that is the system which has been carried on in this country. There is a premium held out to make every old and troublesome person in a workhouse insane. I deny altogether that there are eight or nine thousand people in workhouses insane. I do not believe a word of it. I do not believe, if you went over every workhouse in England, you could find that number; but I should like, gentlemen, to define insanity. No one can agree upon it. There are imbecile people in workhouses. I do not at all advocate the system of treating any person that is curable in a workhouse; but I could find 27 per cent. of cases in lunatic asylums that could be as well treated in a workhouse, under proper dietary and a proper system of management.

It is unnecessary for me to say more upon the subject. I only wish it distinctly understood that I do not advocate the system of the treatment of acute or curable cases in workhouses, but I want to weed the asylums of chronic cases, in order that they may be hospitals, and not be turned into workhouses, which they are likely to be if the present law is not altered.

*The President.*—I think we shall all feel, from our experience of the large county asylums, that a vast proportion of these patients might be taken very good care of, and in a much less expensive manner than they are in county asylums. It strikes me that in addition to that, the cost to the county is very unnecessarily increased by the care of these persons in asylums, and the interests of the curable and recent cases seriously prejudiced. If we consider the case of the Colney Hatch Asylum, the enormous extent of which makes it impossible that the medical staff should exercise all the supervision that is desirable; we must feel that this is in consequence of the enormous number, as Dr. Boyd says, of imbecile old people. You may, if you will, call them insane, but to all intents and purposes they are imbecile creatures, and might be kept just as well in cottages or in suitable wards in workhouses, as they are in the county asylum.

*Dr. Maudsley.*—I may observe, with regard to the observations of Dr. Wood, that if you place these persons under the visitors of county asylums, you will find that the requirements that are made even in the case of imbeciles for their proper care and comfort in the workhouses, will be such that, if the workhouse wards are to fulfil the requirements of the Commissioners in Lunacy, the expense of the treatment of the insane poor in workhouses will be practically very much the same, in my opinion, as it is in the county asylums.

*Dr. Mundy.*—I venture to say that in Scotland the arrangements are so excellent that the cost is equal to the cost in the public county asylums.

*Dr. Monro.*—I do not know whether there would be any use in dividing the visitors and superintendents. Of course the visitors would go as magistrates, and so on; but would it be advisable, supposing the plan which Dr. Boyd suggests is carried out, of retaining a ward in the workhouses for the insane under better auspices, that the superintendent of the county asylum should visit those patients as well as the visitors? It would be placing a great deal of extra work upon them, and would hardly be within their functions.

*Dr. Boyd.*—The superintendents select the cases.

*Dr. Maudsley.*—I have no objection, I repeat, to Dr. Boyd's motion as it stands.

*The President.*—We need not, then, go farther into the details of the

question, but simply put this resolution to the meeting: "That in the opinion of this meeting the treatment of the insane now in workhouses is not satisfactory, and that it is desirable to have the care of all the insane poor of the counties transferred to the visitors and superintendents of the county asylums."

*Dr. Robertson* then read a paper entitled, "REMARKS ON A RECENT ATTEMPT AT THE COMPARATIVE STATISTICS OF BETHLEHEM HOSPITAL AND OF THE ENGLISH COUNTY ASYLUMS." [See Part I, Original Articles.]

*Dr. Monro*.—Gentlemen, I cannot help feeling, after hearing this report of Dr. Robertson, and after having considered the subject of statistics on former occasions, that the saying of D'Israeli is about as true as anything, that of all the humbugs of the present day that of statistics is the greatest. It seems, however, that Dr. Robertson wishes to prove that Bethlehem is in a bad situation from the amount of deaths and the paucity of recoveries. That is what he seems to wish to prove, in opposition to the contrary assertion of Dr. Helps. Now I have one little fact to mention. I suppose there is hardly any one here who would look on St. Luke's Hospital as being in a very much better situation than Bethlehem Hospital, or as very much better than all the county asylums; but as regards the results in cures, I must say that the cures I have heard read to-day, seem to me to belong to a different category altogether. We do not think anything of 50, 53, and 56 per cent. at St. Luke's. Our recoveries, for years and years together, were 68 per cent.

*The President*.—Recent cases?

*Dr. Monro*.—Yes.

*The President*.—The same class of cases?

*Dr. Monro*.—Yes, made out from the same class of cases as Bethlehem, and under the same regulations. But I am not attempting at the present moment to prove from this that St. Luke's is a very healthy situation, or, on the other hand, that the medical treatment at St. Luke's is super-excellent. I believe what I am trying to prove, more than anything else, is the utter humbug of all statistics. I know, for instance, at St. Luke's Hospital, that the variety in the deaths of the year is quite remarkable in the same class of cases, year after year. I am not pretending to state the fact accurately, but I think our deaths used to be about eight or nine in the year, or seven or eight in the year out of about 150 or 160 patients; but I am sorry to say that in the last six months we have exceeded in our first half year what is due for the whole year. It is altogether uncertain; but of the two, Dr. Helps trying to prove that Bethlehem Hospital is in a good situation from his statistics, and Dr. Robertson trying to prove that Bethlehem Hospital is in a bad situation from his statistics; upon these two alternatives, I cannot help saying, so far as I can follow Dr. Robertson's argument, that Dr. Helps is more in the right than Dr. Robertson. Dr. Robertson tries to draw a marked distinction between Dr. Helps' statistics and Dr. Helps' works, and Dr. Hood's statistics and Dr. Hood's works. Dr. Hood is one of the best men that ever lived; and with regard to Dr. Helps, I do not say that Dr. Robertson says he is the contrary; but he certainly draws a very uncomfortable comparison between the two; and yet, as a fact, Dr. Hood and Dr. Helps are the greatest friends, allied for years in the working of the hospital together, and, in fact, all their experience and all their work is very much one. I think that a little adds to the very unsatisfactoriness of the attempt of coming to any conclusion from the result of these statistics. I do not know why Dr. Robertson has taken up so very strongly the cue of pitching into Bethlehem Hospital, for I really cannot call it anything else than that. I remember the time when Dr. Robertson was exceedingly fond of Bethlehem Hospital, and he once stood

for the office of physician there.\* Of course I cannot help having a sort of prejudice in favour of Bethlehem Hospital. As I said last year, my family were associated with it for something like 140 years, since 1728, and of course I feel a little riled at finding that Dr. Robertson, who once thought it such an honour to be in any way connected with Bethlehem Hospital, taking so many occasions for trying to make out things against it. Of course everybody is at liberty to do just what they choose, but I really think that unless you are willing to look upon St. Luke's Hospital as in an infinitely better locality than Bethlehem Hospital, you cannot come to any conclusion, either good or bad, from the statistics which Dr. Robertson has brought forward. The question of Bethlehem Hospital has been settled, and therefore we need not have any particular anxiety about it now as we had two years ago. Allow me to say, that Dr. Hood is one of my greatest friends. I am not thinking or dreaming of saying a word against him, but, of course, it is not altogether agreeable to have such attention drawn to the fact of the statistics having improved immediately so soon as the old regime ceased, and the new regime began. I also think, certainly, that if Dr. Hood was here he would back up Dr. Helps to the uttermost, and that there is no occasion for any of you to think that Dr. Hood and Dr. Helps are quite the antipodes to each other, but quite the contrary.

*Dr. Davey.*—I think, Mr. President, if any one wished to verify an old adage, which says that doctors differ, they would only have to come into this meeting this afternoon, and they would have manifest evidence that doctors do indeed differ, and to a very serious extent, and under circumstances in which mistakes or differences of opinion could hardly be expected to be found, because figures are looked upon as matters demonstrative of truth; but, according to Dr. Monro, figures are all fudge and statistics a mass of humbug. Well, I am disposed to think there is a great deal in statistics, but we have only to use them, and we have only to use figures as they should be used. We should adopt one uniform system in making our tables of admissions, recoveries, deaths, and so on. When that system is adopted, I think we shall avoid the mistakes made either by Dr. Helps or Dr. Robertson, or perhaps by both; and it is greatly to be desired that this uniform system, of which much has been said to-day, should obtain. I have myself much faith in statistics, and I do hope the uniformity that has been recommended we shall find generally accepted, not only by the superintendents of county asylums but by every medical gentleman connected with the insane in any kind of way.

*Dr. Tuke.*—I should like to say a word or two on one point in Dr. Monro's remarks. I think it is a fallacy on his part to undervalue statistics. I believe that statistics, if properly collected and properly compared together, are of the utmost value in the consideration especially of medical questions, and I am surprised that in this room so distinguished a member of the College of Physicians as Dr. Monro, should throw any doubt on that matter. It appears to me that the point of Dr. Robertson's paper is not to show that Dr. Helps was wrong, or that he was worse or better than anybody else, but to show that Dr. Helps had put forward an argument in support of Bethlehem Hospital which his figures did prove, but proved it by a fallacy; and I think there is no doubt whatever, that without any disrespect to Dr. Hood or Dr. Helps, or any invidious comparison between him and Dr. Hood, he showed that the statistics of Bethlehem were not so superior as they clearly ought to be. To throw any doubt on statistics that are compared together in the way St. Luke's and Bethlehem are here, sixty-five recent cases in the one and forty in the other, would be like schoolboys trying to compare fractions before reducing them to a common denominator.

\* See note to Dr. Robertson's Paper, Part I, Original Articles, page 314.

*Dr. Monro.*—But Bethlehem and St. Luke's are common as regards regulations and admissions.

*Dr. Tuke.*—With regard to recent cases, you have to compare their ages; for instance, if you took 100 recent cases, and compared them with another 100 recent cases, you would get probably into a dreadful dilemma, because you would ignore the only way in which they should be compared together, so many of the same sex, and so many of the same age, admitted at the same time, and for the same disease. Without this there is no possible way of making any comparison. I think this meeting ought to acquit Dr. Robertson of doing more than defending the English county asylums against the figures of Dr. Helps.

*Dr. Arlidge.*—I agree with Dr. Monro that the figures brought before us in this way are not proof, one way or another, of what they were attempted to show, which is, that one place is better than another, or that one treatment is better than another, or that the circumstances surrounding Bethlehem are better or worse than those attaching to the county asylums. It is so very frequently the case in statistics that the figures compared are not comparable. The conditions surrounding the facts which are brought together in the form of figures are so different. As Dr. Monro says, in Bethlehem and in St. Luke's the conditions of admission are the same, but besides that the question of the relative or the medium age ought also to be brought into consideration.

*Dr. Monro.*—It is the same.

*Dr. Arlidge.*—At the same time you might admit on the same conditions a certain number of patients as to the duration of their illness, but the average age in any one case might exceed the age of the people admitted to Bethlehem in the same year. Then Dr. Robertson's statistics seem worthless in this respect—they are based on a very small number of cases. If you take the Retreat, or some other place where only a dozen or two patients in a year are admitted, and they manage to cure six or nine of these, it gives a large proportion of cures. Again, with reference to deaths, out of a dozen admitted, only one perhaps will die in one year and half a dozen may die the next. These statistics are therefore worthless unless you take a large number of years and a very large range. As far as showing anything therefore goes, I do not think Dr. Helps' figures prove what he would attempt, nor do I think that Dr. Robertson's quite contradict them, because he has made some mistakes in giving some of his data upon too scanty numbers.

*Dr. Maudsley.*—I have one general observation to make with regard to statistics, a great deal having been said about the fallaciousness of them. As this is the time, however, for remembering old adages, I would in regard to the fallaciousness of statistics, first mention a remark which occurs to my mind; it is this, that there is nothing in the world so fallacious as figures except facts. Having said this, I would point out what is, after all, the real aim and object of statistics. Statistics never do establish laws or exact facts of any kind; they merely establish *tendencies*, and are of no further use than to afford a starting place for further and more rigorous inquiries; they give us a line of direction in which to pursue investigations, but they never give you the law you are to discover. If they are properly collected, as Dr. Arlidge has just remarked so well, they are certainly most useful, but they are generally so insufficiently taken as to be not only not useful but positively to mislead. Strictly comparable cases are not taken; conditions and circumstances of importance are neglected, or are not observed as they should be, so that the statistics lose all their value, and are positively used for the purpose of inculcating what is not true. Instead of performing what is their right function, saving you from having ignorance foisted upon you, they even foist error upon you.

*Dr. Monro.*—We should be glad, Dr. Webster, if you would say a little on the subject. Dr. Webster's connection with Bethlehem Hospital is very intimate, and whatever he says upon it would be of the greatest advantage to us. He has been one of the governors there for the longest period, and one of the most active governors.

*The President.*—It is hardly fair to call Dr. Webster out if he feels any hesitation on the subject.

*Dr. Monro.*—I have only one reason for regretting having tried to write down statistics, and that is, that some of the most interesting I ever read were made by Dr. Webster upon Bethlehem Hospital itself; and I at one time went in for a few statistics, and I remember well I was guilty of great plagiarism in copying from Dr. Webster's.

*Dr. Webster.*—Having been called on by Dr. Monro, and as it seems to be the wish that I should make one or two observations, perhaps this society will permit me to state that I feel myself in a very peculiar situation, being, as you know, a governor of Bethlehem Hospital, and taking great interest in it. In anything I might say, therefore, I should be the last person to criticise and make any reflections on Bethlehem Hospital. Dr. Monro has alluded to the fallacy of statistics. I am very sorry to hear that from Dr. Monro, because it comes with great weight; and I know it applies to the statistics of Bethlehem Hospital, or I presume it does, because they are there very numerous; and I dare say that Dr. Wood knows very well that those tables that were published by the Bethlehem Hospital were originally formed, twenty-one years ago, by myself. Mr. Laurie and myself drew up the first Report of Bethlehem Hospital, and I took the charge of statistics; therefore I am very sorry to hear that statistics are all bosh.

*Dr. Monro.*—I approve of yours, Dr. Webster.

*Dr. Webster.*—I think the statistics of Bethlehem Hospital give a very great deal of valuable information, enabling gentlemen to draw deductions and inferences which are of the greatest value. With regard to the table Dr. Robertson has mentioned, that, of course, I have nothing to do with; in fact, I have nothing to do with the tables at all, except that they are kept in the same form as Dr. Robertson has alluded to; and with all respect to what Dr. Monro has said, I think some of the remarks which Dr. Robertson has made are very much to the purpose, because the patients in Bethlehem Hospital, no one knows better than Dr. Wood, are of a very peculiar class. They are recent cases, and therefore the number of cures and the number of deaths must not be compared with the number of deaths in other asylums, where many of them are old cases, physically as well as morally, and not of the same class. Dr. Monro has alluded to the number of cures in St. Luke's Hospital. I think, if I mistake not, he says the number is much larger than in Bethlehem—that they are 69 per cent.

*Dr. Monro.*—Sixty-eight.

*Dr. Webster.*—The number with us is 52 per cent. As I said before, I am very unwilling to make any remarks because of my peculiar position, but I must dissent from the doctrine of your ex-president, that statistics are humbug and bosh.

*Dr. Monro.*—I did not quite say that.

*The President.*—I am sorry that Mr. Ellis is not here, because he could, perhaps, have explained to you more satisfactorily than I can, how it was that these statistics came about. I have not his direct authority for telling you, but, as I believe he only wishes that you should know the truth, the whole truth, and nothing but the truth, I think I am entitled to tell you the facts. Some two or three years ago, before Mr. Ellis was appointed to St. Luke's, he was attached to the Hanwell Asylum, and he was asked when the very popular question of removing Bethlehem was before the public, what he

could do to help that side of the question. I do not know what suggested to him the idea of giving these statistics, or whether, indeed, it was his own idea, or was suggested by somebody else. However, he set to work very industriously to issue circulars to different county asylums, and to obtain statistics for the purpose of proving that Bethlehem was, what some of our friends wished to represent it, a very horrible place. Unfortunately for his then view, the facts did not come out as he wanted them to do, and he could not make out, as he had hoped to have done, a case against Bethlehem from these statistics, and the result was that the case was not put forward at all. Time went on, and Mr. Ellis ceased to be interested in that view of the question. He came to be a colleague of mine and my friend Dr. Monro. We did not go quite with the popular notion, as to throwing Bethlehem into the kennel, and with it the hundreds of thousands of pounds that had been spent upon it. We thought there were some disadvantages in it, and that if it were to be built again it might be improved; still we thought, as prudent people, there was no sufficient case made out against it to warrant the enormous waste of throwing such a building away. On the occasion of one of our meetings here, I said something upon the subject, and I believe it got into some of the journals, and some of those connected with Bethlehem heard that I had made some remarks upon the subject here, and I was applied to, to know if I would have any objection to give evidence before the Charity Commissioners. I said, "I do not want to mix myself up with a contested question of this sort, but still I do not know why I should object to tell you what I think. You must take it for what it is worth." Accordingly I was asked to give this evidence, and in talking over the matter with my colleague, Mr. Ellis, in our ordinary tour through the wards of the hospital, he told me what he had attempted, and how he had failed. "Well," I said, "if you have collected those facts, I think it would be but fair that they should be made use of. Although they were got for the purpose of saying something against Bethlehem, if they turn out to be in favour of Bethlehem it is not quite fair to suppress them." Mr. Ellis saw no reason why they should not be collected, and accordingly he set to work to collect them, and now Dr. Helps has got the credit, or rather the discredit of putting forth these figures, but he is in no way responsible for them; they are not his collection at all. He cannot surely be blamed for making use of evidence which was provided for him by another. It seems a very natural thing for him to do, having the opinion that he has, an opinion which, curiously enough, is entertained by every one of the medical men who have been attached to Bethlehem, both past and present. It seems, therefore, but natural that he should avail himself of the opportunity which these statistics afford him of supporting his own view. So much then for the facts as to the manner in which these statistics were collected—with no view of saying anything unkind or disparaging, in the least degree, of other places, but really for the purpose of showing that there was not such a grave case against Bethlehem after all as was supposed. I am very much disposed to agree with my friend Dr. Monro, as to the question of statistics being very worthless under many circumstances. Of course, under certain circumstances, they are most valuable, but, as Dr. Arlidge has observed, of what value are statistics coming from an institution where it may so happen that there has been only one death, and you may say that in consequence of that circumstance the death-rate is something marvellously low? It cannot be pretended that in that instance they are of any worth whatever, and yet that is what is pleaded by Dr. Robertson, as a part of his case. That there were certain omissions in the statistics prepared by Mr. Ellis I can quite believe: no doubt there were; but still, as far as they go, they are rather in favour than against Bethlehem. But putting aside the ques-

tion of statistics altogether, let us come to the honest facts which are within our own knowledge and belief. I do not think that Dr. Robertson, or any of those who are most determinedly opposed to Bethlehem, will pretend to say that the deaths in Bethlehem have anything whatever to do with the locality. I do not think he will pretend to tell me that if there happened to have been sixteen or sixty deaths (of course there are nothing like sixty), but I will say, if there happened to be ten or fifteen deaths, that was in the smallest degree influenced by the position of Bethlehem. Dr. Monro has told you that, in our own hospital, it so happens that in the last six months we have had more than our yearly average of deaths. Dr. Robertson may, perhaps, argue that it is because St. Luke's is as bad a place, or perhaps, worse than Bethlehem; but the truth is, that if you take the whole statistics, and I think the statistics of St. Luke's were published some years ago, for something like a hundred years [Dr. Arlidge.—Yes a hundred years—the centenary], they show a very satisfactory return in all respects as regards St. Luke's, perfectly putting out of the question the idea that the sanitary condition of St. Luke's was anything to be complained of. We must all know, perfectly well, as regards the death-rate, that in these institutions it very considerably depends on accidental circumstances. I do not at the present moment recall the individual cases. I am sorry that I did not refer to them before coming here, that I might have told you briefly the circumstances under which each of these patients died during this year, that you might have judged how far they had anything to do with the locality. Of course in Bethlehem, as in St. Luke's, a certain number, very often a large proportion of the patients who die, are patients who come in almost moribund. Many persons come to both these hospitals—I speak that from personal knowledge of the fact—almost moribund, and are received merely because we are unwilling to send them out to die. It is a fact—I speak advisedly—that I have myself frequently sanctioned the admission of patients that I believed would hardly have lived to their journey's end, if we had refused them admission. A certain proportion of these patients die, do what you can for them. It cannot be pretended that it is because they get into an unhealthy locality. And then this great fact stares one in the face, to which it seems to me there can be no answer, that Bethlehem does not avowedly stand in the healthiest neighbourhood. Lambeth is known to be a low-lying district, and not the healthiest neighbourhood certainly; but when cholera was raging, which it did literally up to the very walls of the hospital, for there were cottages built up against our walls, I believe, in which patients were dying, we had not a single case of cholera in the hospital. I think that is an unanswerable argument to anything that is alleged against Bethlehem as to its sanitary condition, and I suppose that in the district of Lambeth there was a larger proportion of deaths from cholera than in almost any other district in London, and was it not something marvellous that in a small area of, I think, fourteen acres, there was not (I was going to say), not a single death, but, if I rightly remember, there was not a single case. I think that fact alone settles the question of the healthiness of the spot, and I never heard an argument used that could be considered as for one moment standing against it. Well, as I said before, with regard to the deaths, we must all know perfectly well that there are a certain number of patients who come into our hospitals and asylums who will die, put them where you will. It does not matter whether they are at the top of a mountain, or at the bottom of the valley, or whether they are in one place or another—their days are numbered, and they die as a matter of course. It is rather a question of how far the diseases have run, and how long the patients can be kept alive by the most generous diet, stimulants, and that kind of thing. I have a patient now under my care in St. Luke's Hospital, who has been there a

great many years, and who is kept alive by a most costly diet; he, in fact, lives upon wine and brandy, and other things, in a most lordly fashion. I do not hesitate to say that if that man had been with his friends he could not have had these things, and he must have died. He is simply kept alive by a diet which would be out of the question in any other place than a hospital. The locality has, in the majority of cases, nothing to do with the matter; it is simply a question of the care and treatment. Then again, although we feel that there are reasons why the rates of cure differ so very much in different asylums, this fact yet remains, which Dr. Monro has very fairly pointed out, that the average cures of St. Luke's have been upwards of sixty per cent. We do not claim for ourselves any special merit for that. There is some accident or other which goes a long way to influence that result; but, although we do not claim any special merit for ourselves, still the fact remains, and unless we are prepared to admit that the position of St. Luke's is something very superior to the position of Bethlehem, we must allow that the sanitary condition of both is not so unsatisfactory as our friend Dr. Robertson wishes us to believe. At any rate, I should hope that it be distinctly understood that the statistics which have given occasion for this paper were produced in perfect good faith by one who had no interest whatever in Bethlehem. They were got together for the very opposite purpose to which they have been applied. They failed entirely in supporting the view for which they were collected, and in common fairness it seemed but reasonable that they should be made known, and made use of.

*Dr. Mundy.*—Allow me to say a word on this subject. As Dr. Davey said, certain principles must be laid down independently of statistics; and under certain circumstances, as Dr. Monro very justly remarked, they are only humbug. I believe the intention of Dr. Robertson was merely to show that Bethlehem had not found a new arcanum to cure the insane in a much higher degree than county asylums, although Bethlehem is in a much more favorable position than many county or private asylums. You know that it is a fixed rule at Bethlehem that incurable patients should be retained only for one year. I do not mean to say that this rule is strictly observed—indeed, I know it is not; but still the rule exists. Now what is the real basis of statistics? The first basis is good principles, which we have not at all. Cure, admission, and discharge are really worth nothing. The first principles of good statistics should be honesty, straightforwardness, and truth. I do not say that medical men are not honest; I beg to say that they are; but statistics are nothing but a great drum for one place or another. If they say at one place, "We have cured seventy-five per cent," they immediately say at another, "We have cured eighty-five or one hundred." I could illustrate this by reports which I have in my hands. Statistics are worth nothing, unless they are based on proper principles. You say you discharge so many patients; they are not in your place any longer; but where are they? Perhaps in the place of your neighbour, or in the workhouse, or perhaps, they are dead, having died from insanity. The same man that is cured by you to-day dies perhaps in a fortnight, in a private house, in another lunatic asylum, or in a workhouse. The conclusion I come to is, that we want certain fixed principles laid down upon which to base our statistics; and unless we have these, our contentions will only be like a battle of windmills.

*Dr. Robertson.*—I will in the first place, Mr. President, say how cordially I concur with you in all you have said on the subject of statistics. When, two years ago, I ventured to urge the removal of Bethlehem from its present site in the Lambeth Marshes, you may remember I did not ground my case on statistics, but on a very much wider fact, viz., that the scientific treatment

of the Insane could not be carried out in a large town hospital. I did not attempt statistics; and the question having been, as Dr. Monro boasts, settled, by the obstructive governors, and the golden opportunity of building a new Bethlehem, such as my revered friend Dr. Conolly pictured, having been allowed to pass, I should have been quite content to let the question drop, and leave the governors of Bethlehem and their chosen physician to their own devices. The School having been given up also, I felt disposed to leave the case of Bethlehem in despair; but when this year's Report was sent to me, and I was told there of fifty in the thousand of recent cases dying in Bethlehem, while of similar selected cases in the asylums in the home counties, 135 in the 1000 died, I could not keep a silence which must have seemed an acquiescence in this monstrous fallacy. Hence it was that I was driven by Dr. Helps into this examination of the Bethlehem statistics. I think that when my paper is published that you, sir, will with your knowledge of asylum statistics agree with me that I have made out my case. However, I am, of course, no fair judge on this point. At any rate, you must admit that, as superintendent of one of the asylums of the Home counties, I am the attacked party. Bethlehem, in the redoubtable person of her resident physician, has pitched into me (to quote Dr. Monro's elegant diction), not I into Bethlehem. Here is the resident physician of Bethlehem saying, "Look! in the asylums of the home counties, your mortality in recent cases is 135 in 1000, mine at Bethlehem, in similar selected cases, is only 50 in the 1000; hence my natural advantages are very great, and my site healthy." You have done me the honour of listening to my reply in the paper read, and I shall not presume to trespass further on the time of the meeting.

*Dr. Davey.*—It is a very few minutes, Mr. President, that I shall occupy your attention and the attention of the gentlemen present; but I am induced to show you upon this occasion *two MODELS OF BEDSTEADS*, which I conceive are very valuable, and very well adapted for the accommodation of a certain class of patients, particularly in county asylums; I mean those patients which are technically called "wet patients." Now, I may perhaps be of a rather hopeful temperament; but certainly I am not so hopeful as to expect that under any kind of discipline, however favorable and well-judged that discipline may be, you will ever succeed in getting rid of wet patients, as they are called. Such patients will turn up every now and then, in spite of the best management; therefore it becomes a question how best to accommodate them, and what form of bedstead to use for them. The subject has been for long years past in my mind; and the bedsteads, the models of which are before you, have been long in use at the Hanwell and Colney Hatch Asylums. They were introduced by me at Hanwell in 1843, and at Colney Hatch in 1851; and I am induced to call your attention to these bedsteads now, because, to my surprise, I read in a report of a county asylum for only last year, 1864, these words. It is an extract from the report made by the Commissioners of Lunacy on the occasion of their visiting a county asylum. "The proportion of straw beds," they say, "is still large; the return of wet and dirty beds for the last night was eleven in the male and twenty-three in the female wards." Now, I thought that the straw beds had been got rid of, and I was not at all prepared to learn that straw beds were in use in any county asylum. You will therefore judge of my surprise when I read that sentence. It immediately occurred to me that there may be other asylums than this one, the report of which I hold in my hand, in which the straw beds are still in use; and if such be the case, I thought I should be doing some service in the cause of the insane, if I were to take this opportunity of calling your attention to the models before you. You are aware that at the

Hanwell Asylum the straw beds were for many years in use, and I think it was Dr. Conolly who objected so strongly to those straw beds, for they are very objectionable, very filthy, and very disagreeable ; they make the walls in a wretched state in the morning, and altogether they are very slovenly and very ill adapted for the class of patients for whom they are employed ; and Dr. Conolly, with the aid of the officers at Hanwell, on one occasion—I think it must have been about the year 1840—contrived this form of instrument which I hold in my hand. It goes by the technical name of the stretcher, and is placed in the ordinary bedstead. I found this stretcher in general use at Hanwell at the time of my appointment in 1840. I had not been long at Hanwell, and had hardly become practically acquainted with the requirements of the insane, before it struck me, from my experience, that these stretchers were very objectionable. Every now and then I was called into the wards early in the morning on account of these stretchers having been broken ; and not only so, but because the broken pieces had been made implements of offence or defence, as the case might be ; and during my connection with Hanwell Asylum, particularly the early part of it, I had to treat numbers of accidents the result of the employment of these broken stretchers by patients. There was another objection with regard to these stretchers. They were often not used as they were intended ; they were taken down and placed in a corner of the room, and the patients were found lying on the bottom of these bedsteads. These were very palpable objections to the use of the stretcher. It occurred to me that all the advantages of the stretcher might be obtained—getting rid of the disadvantages. With that object in view, I contrived to place the framework of the stretcher on the bedstead—to make it, so to speak, a fixture, a part and parcel of the bedstead. Here is the stretcher, represented by these two iron bars ; they are fixed on the inner and upper part of the bedstead, and they fall into a groove at the lower part, and slip readily into a metal notch, where they become fixtures, and are fastened by the attendant from the outside. Of course, when the bedstead is prepared for use, this canvas is placed. There are two canvases to each bedstead ; one is supposed to be used one night, and the other another ; the dirty canvas is taken away in the morning to the laundress and washed, and is ready for use again at the proper time. By this contrivance the patient has all the advantages of a stretcher, without the disadvantages to which I have alluded. But it occurred to me that I might modify this, and I therefore contrived this bedstead, which you see opens like a flap. This is covered with sheeting and the blanket, and upon the canework the patient lies. This is easily kept clean ; no offensive smell can arise from it ; supposing it to be found wet in the morning, the attendant merely wipes it with a wet flannel, and cleans it very easily indeed. At night it falls down, and is fastened from the outside. I think this arrangement is greatly to be preferred, and I submit these bedsteads to you as very important matters in the furnishing of any county asylum ; for, besides being much more cleanly, and preferable in every respect to the straw beds, they would accomplish a great saving in point of expenditure. There is a saving, I think, of about 8s. or 9s. in this bedstead, compared with the other bedstead and a couple of stretchers. That of itself is a consideration, which may weigh heavily in the minds of many of our county magistrates, who, of course, do the best they can towards furnishing county asylums at the cheapest rate. [See Plate in illustration of bedsteads at the end of Journal.]

*The President.*—This question of bedsteads is one in which I have taken some interest. Another scheme occurred to me, while I was at Bethlehem, and it has been carried out in a somewhat modified form. It is, perhaps, of rather too expensive a character for county asylums. I do not know the cost of these things ; but my plan is, to have a spring mattress with a hole

in the centre, covered with stout waterproof material. A metal tube is drawn through and screwed on. You then have a very comfortable bed; you require no more bedding at all; and you readily get rid of all moisture. The objection to the others is that they hold the moisture; they become saturated, and a nasty smell arises. I do not know how far the objection to my plan on the score of expense may be obviated by the mattresses being made in large quantities; but now-a-days they do make spring mattresses very cheaply.

*Dr. Maudsley.*—They have them now in a common mattress.

*The President.*—No doubt, but it would simplify the matter by having spring mattresses. This, as Dr. Davey is aware, is the old style of bedstead.

*Dr. Davey.*—The bedstead itself is old: the appendage is what I suggested.\*

*Dr. Maudsley.*—Sir, on behalf of Dr. E. Sparshall Willett, who is not able to be himself present, I exhibit this to the Association. It is AN INSTRUMENT FOR FEEDING those who will not take their own food, and is intended to supersede the stomach-pump. The advantages of it are, I believe, that in the first place you can manage the whole instrument with one hand. This spring which I touch is at present closed; but by putting pressure upon it the fluid, beef tea, or whatever it is, begins to flow. You can stop it at any moment by letting the spring go. Inside this elegant apparatus is a tolerably close sieve, that would prevent anything going through that might stick in the tube.

*Dr. Monro.*—Is not that tube rather large for the nostril?

*Dr. Maudsley.*—It is rather large for the nostril, but it is intended for that.

*Dr. Tuke.*—It appears to me there is a very obvious objection to that instrument. In using the nostril tube with the ordinary biggin-bottom sieve, or the common bladder, as I always do, you have the power of applying slight pressure upon the contents you want to send in, and that will send a thicker fluid; but it is obvious that with this apparatus you could only send the very finest; you have no pumping power.

*The President.*—That is the objection I was going to suggest. It is obvious that through such a small tube as this, unless you had some more force than mere atmospheric pressure, you would be a very long time getting the food through. When you are obliged to resort to a nose-tube, in case of violent opposition through the mouth, which I think is always the most preferable way, you do not quite know what you are doing; and another objection is the time occupied in getting the food into the stomach, which is a most material matter.

*Dr. Monro.*—Besides that, I should have thought this tube too large for the nostril.

*Dr. Maudsley.*—It is rather large, but it will go easily enough down the nostril.

*Dr. Davey.*—Will you allow me to make a few remarks in connection with this matter? Of course I have in my time been called upon very many

\* Note by Dr. Robertson.—*In many of the county asylums a complete system of night-nursing has obviated the necessity for the use of these expedients against wet beds, here referred to by Dr. Davey and the President. I regret that I was absent from the meeting during the reading of Dr. Davey's paper, or I should more fully have supported this view. The present practice in this point is a dozen years ahead of these mechanical contrivances, which indeed have been all placed out of use by the employment of night-nursing on Mr. Gaskell's principle, and which necessarily prevents wet beds.*

occasions to administer food to patients who obstinately refused it. For a long number of years I used what I know is used now to a very great extent—the ordinary stomach-pump; but I have not used the stomach-pump since 1858, and I have never used a nasal tube. I have had, however, during the past six or seven years many cases of obstinate refusal of food, and so obstinate has the refusal been that I have been compelled upon many occasions to resort to the forcible administration of nourishment, and I have never failed to give my patient as much food as I liked. The instrument that I use is not unlike this. It has not a tube like this, but it terminates in an ordinary nipple. The patient is laid on the sofa; I go behind the sofa, at the head, and approach the patient from behind. The head is firmly held, and this nipple I pass into one nostril; having secured it with a common stop-cock, I let pass into the nostril about a table-spoonful of beef tea or milk. From the position in which the patient is, that drops directly into the pharynx, and the ordinary motion throws it into the stomach. It takes me ten minutes or a quarter of an hour; but in that time I can give half or three quarters of a pint of fluid in a very easy way; and I always approach a case of that kind with the utmost confidence, knowing I am going to succeed. I have adopted that plan for the last six or seven years, and have never failed.

*Dr. Monro.*—Have you a model of that instrument?

*Dr. Davey.*—I have one that I always keep near at hand, and have often been called in to these cases by medical men in my neighbourhood, and they have been the very worst cases, or I should not have been called in to them.

*Dr. Monro.*—That scheme obviates the great danger of the nasal tube.

*Dr. Maudsley.*—I used regularly at one time to adopt the plan of Dr. Davey—

*Dr. Davey.*—It was invented by one of the medical superintendents of the Northampton Asylum.

*Dr. Maudsley.*—I was going to mention the plan I adopted with regard to it when I was superintendent of the Manchester Hospital. I used to feed people through the nostril with the ordinary elastic bottle, and an ordinary ivory pipe, putting the nozzle of it into the nostril, and allowing the food to run down, which in most cases it will do. Now and then, however, you come across obstinate cases, in which the patient tries everything he can to resist, and you run great danger of getting the food into the trachea, and of choking the patient. I recollect a very powerful man whom I had to feed in that way twice a day for three weeks, and on one occasion he struggled so violently, and made such efforts to eject the food by mouth and nostril, that some of it got into the larynx, and he was as nearly as possible asphyxiated—the attendant thought he was—and I had to give it up, and resort to ordinary measures. Since then I have never fed any one except by the stomach-pump, which I certainly very much prefer.

*Dr. Davey.*—I shall certainly go on using it through the remainder of my life. But it requires great care. You must not adopt any hasty or abrupt measures.

*Mr. Sankey.*—What would be the difference between the stop-cock and the old Lincoln funnel?

*Dr. Hunt.*—For the last six or seven years I have had a great deal to do with feeding in hospitals and in private practice. I have had to feed one or two cases for nine weeks, and I have tried every device I could. For the last four or five years I have always used a tube like this of Dr. Willett. This is not at all too large; it should be somewhat longer. I have been in the habit of using an india-rubber bottle. You can have it of any size, and you can use any amount of force with it. Anything in reason can pass through this. I have never yet seen a bad symptom result, and I have never had any trouble in passing the tube. Another great advantage I have always found from it is,

that the patient can be sitting up in the chair, and the attendants, if you want two, can take him by the arm and pass it down into the stomach. The patient then has the mouth to breathe through; you have not to put anything over the mouth, or to use any force there; whereas, with the old feeding plans, you have to put a cover over the mouth to prevent the patient getting the food there and spitting it out; and sometimes the patient will throw it all over you, and all over his own face. But by passing this tube into the stomach you have no occasion to lose a single drop of fluid. I think I am speaking within bounds when I say that in the last six years I have fed over a hundred patients, and in more than one instance for nine weeks at a time.

*The President.*—It strikes me that the tube is rather too short.

*Dr. Maudsley.*—It does not matter if you get it beyond the glottis.

*Dr. Tuke.*—I hope no member will hesitate to give small quantities of food without any apparatus at all. In case of the refusal of medicine there is no possible difficulty in administering it. The only difficulty in feeding through the nostril will be the time. I undertake to say you cannot give a pint of beef-tea in that way in less than an hour.

*Dr. Davey.*—Excuse me; that is not my experience.

*Dr. Boyd.*—The same instrument I have been in the habit of using in the stomach, only of a much larger size. We feed a dozen patients in an hour.

*Dr. Tuke.*—Yes, introducing it into the stomach. But in case of spasm of the glottis, what would be the result?

*Dr. Boyd.*—I never saw it fail.

*Dr. Monro.*—We have had contrary opinions expressed upon this matter. I certainly think it is a question of the very greatest importance. As far as my experience has gone, I strongly sympathise with what you yourself and Dr. Maudsley said, viz., that you always prefer the stomach-pump very much to the use of the nasal tube. This new mode which has been suggested is of course distinct from the tube; but I should be very much interested if we could, in consequence of this conversation, come to any conclusion as to the risk of the nasal tube ever getting into the trachea. I do not myself ever remember a case in which I could feel confident that it did get in. There have been one or two, however, in which I have had a strong suspicion of it. Dr. Hunt's experience seems to have been very great indeed. He says he has fed patients with this nasal tube every day of his life almost, and he did not ever have any accident.

*The President.*—In careful hands I presume the nasal tube is tolerably safe; however, as a general rule, no doubt the stomach tube by the mouth is far safer.

*Dr. Hunt.*—There have been more than one or two deaths from the stomach tube.

*Dr. Monro.*—Have you ever seen a tube that you could certify got into the trachea?

*Dr. Hunt.*—No, I never saw that. You can tell, from the first drop or two of the liquid, if you are careful at first, because, of course, the spasm will be set up.

*Dr. Belgrave* read a paper on—"THE USE OF THE BROMIDES OF POTASSIUM, CADMIUM, AND AMMONIUM, IN THE TREATMENT OF INSANITY. (See Part I, Clinical Cases.)

On the motion of the President a vote of thanks was accorded to Dr. Belgrave for his interesting paper.

A vote of thanks was also passed to the President for his attention to the business of the day, and to the President and Fellows of the Royal College of

Physicians, for their courtesy in granting the use of the College for the meeting.

The proceedings then terminated.

The annual dinner was held in the evening at the Langham Hotel; Dr. Wood, President, in the chair. Among the guests present were Dr. Jenner, Dr. Quain, Dr. Webster, Dr. Sieveking, Dr. Garrod, Dr. Stewart, Dr. Radcliffe, Mr. Erichson, Mr. E. Hart, Mr. E. Sercombe, &c., &c.

### *Confession of Constance Kent.*

The following letter appeared in the 'Times' of Monday, the 28th of August :

"SIR,—I am requested by Miss Constance Kent to communicate to you the following details of her crime, which she has confessed to Mr. Rodway, her solicitor, and to myself, and which she now desires to be made public.

"Constance Kent first gave an account of the circumstances of her crime to Mr. Rodway, and she afterwards acknowledged to me the correctness of that account when I recapitulated it to her. The explanation of her motive she gave to me when, with the permission of the Lord Chancellor, I examined her for the purpose of ascertaining whether there were any grounds for supposing that she was labouring under mental disease. Both Mr. Rodway and I are convinced of the truthfulness and good faith of what she said to us.

"Constance Kent says that the manner in which she committed her crime was as follows :—A few days before the murder she obtained possession of a razor from a green case in her father's wardrobe, and secreted it. This was the sole instrument which she used. She also secreted a candle with matches, by placing them in the corner of the closet in the garden, where the murder was committed. On the night of the murder she undressed herself and went to bed, because she expected that her sisters would visit her room. She lay awake watching until she thought that the household were all asleep ; and soon after midnight she left her bedroom and went downstairs, and opened the drawing-room door and window shutters. She then went up into the nursery, withdrew the blanket from between the sheet and the counterpane, and placed it on the side of the cot. She then took the child from his bed, and carried him downstairs through the drawing-room. She had on her night-dress, and in the drawing-room she put on her goloshes. Having the child in one arm, she raised the drawing-room window with the other hand, went round the house and into the closet, lighted the candle, and placed it on the seat of the closet, the child being wrapped in the blanket, and still sleeping ; and while the child was in this position she inflicted the wound in the throat. She says that she thought

the blood would never come, and that the child was not killed, so she thrust the razor into its left side, and put the body, with the blanket round it, into the vault. The light burnt out. The piece of flannel which she had with her was torn from an old flannel garment placed in the waste bag, and which she had taken some time before and sewn it to use in washing herself. She went back into her bedroom, examined her dress, [and found only two spots of blood on it. These she washed out in the basin, and threw the water, which was but little discoloured, into the footpan in which she had washed her feet over night. She took another of her nightdresses and got into bed. In the morning her nightdress had become dry where it had been washed. She folded it up and put it into the drawer. Her three nightdresses were examined by Mr. Foley, and she believes also by Mr. Parsons, the medical attendant of the family. She thought the blood stains had been effectually washed out; but on holding the dress up to the light a day or two afterwards she found the stains were still visible. She secreted the dress, moving it from place to place, and she eventually burnt it in her own bedroom and put the ashes or tinder into the kitchen grate. It was about five or six days after the child's death that she burnt the nightdress. On the Saturday morning, having cleaned the razor, she took an opportunity of replacing it unobserved in the case in the wardrobe. She abstracted her nightdress from the clothes basket when the housemaid went to fetch a glass of water. The stained garment found in the boiler-hole had no connection whatever with the deed. As regards the motive of her crime, it seems that, although she entertained at one time a great regard for the present Mrs. Kent, yet if any remark was at any time made which in her opinion was disparaging to any member of the first family, she treasured it up, and determined to revenge it. She had no ill-will against the little boy, except as one of the children of her stepmother. She declared that both her father and her stepmother had always been kind to her personally, and the following is the copy of a letter which she addressed to Mr. Rodway on this point while in prison before her trial :—

“ ‘ Devizes ; May 15th.

“ ‘ SIR,—It has been stated that my feelings of revenge were excited in consequence of cruel treatment. This is entirely false. I have received the greatest kindness from both the persons accused of subjecting me to it. I have never had any ill-will towards either of them on account of their behaviour to me, which has been very kind.

“ ‘ I shall feel obliged if you will make use of this statement in order that the public may be undeceived on this point.

“ ‘ I remain, Sir, yours truly,

“ ‘ CONSTANCE E. KENT.

“ ‘ To Mr. R. Rodway.’

"She told me that when the nursemaid was accused she had fully made up her mind to confess if the nurse had been convicted, and that she had also made up her mind to commit suicide if she was herself convicted. She said that she had felt herself under the influence of the Devil before she committed the murder, but that she did not believe, and had not believed, that the Devil had more to do with her crime than he had with any other wicked action. She had not said her prayers for a year before the murder, and not afterwards, until she came to reside at Brighton. She said that the circumstance which revived religious feelings in her mind was thinking about receiving sacrament when confirmed.

"An opinion has been expressed that the peculiarities evinced by Constance Kent between the ages of twelve and seventeen may be attributed to the then transition period of her life. Moreover, the fact of her cutting off her hair, dressing herself in her brother's clothes, and leaving her home with the intention of going abroad, which occurred when she was only thirteen years of age, indicated a peculiarity of disposition, and great determination of character, which foreboded that, for good or evil, her future life would be remarkable.

"This peculiar disposition, which led her to such singular and violent resolves of action, seemed also to colour and intensify her thoughts and feelings, and magnify into wrongs that were to be revenged any little family incidents or occurrences which provoked her displeasure.

"Although it became my duty to advise her counsel that she evinced no symptoms of insanity at the time of my examination, and that, so far as it was possible to ascertain the state of her mind at so remote a period, there was no evidence of it at the time of the murder, I am yet of opinion that, owing to the peculiarities of her constitution, it is probable that under prolonged solitary confinement she would become insane.

"The validity of this opinion is of importance now that the sentence of death has been commuted to penal servitude for life, for no one could desire that the punishment of the criminal should be so carried out as to cause danger of a further and greater punishment not contemplated by the law.

"I have the honour to remain,

"Your very obedient servant,

"JOHN CHARLES BUCKNILL, M.D.

"Hilmorton Hall, near Rugby;  
"August 24th."

*Constance Kent's Confession.*

We publish elsewhere the letter in which Dr. Bucknill has given to the world the last, and, we suppose, the final confession of Miss Constance Kent. Marvellous as the story is, it is not impossible; and as there can now be no motive for deception, we do not know why it should not be accepted. It is perfectly possible that she may have asphyxiated the child wholly or partially with the flannel before she inflicted the wound which almost severed its head from the body. The division of the trachea would account for no scream being uttered. Her account of the manner in which she planned and executed her crime, her cool and circumspect depravity, and the marvellous way in which she escaped detection, form a history which is scarcely to be surpassed in horror and in wonder.

The passions which led to the commission of the murder were aroused by the most ordinary cause. Fancied slights and jealousy of a mother-in-law and her children are amongst the most common sources of domestic broils. In this case, however, they proved sufficient to arouse a tiger-like instinct, which, under no restraints, moral or religious, dominated the girl's whole being. A curious psychological study, some will say. We see in it nothing more than a nineteenth century reproduction of the old, old story of the first murder, which, be it myth or history, parable or fact, receives fresh witnesses to its intrinsic truth from every calendar of crime.

This Road murder has been paraded before the public as a matter of scientific interest. Since the first confession of the culprit we have been favoured from various quarters with theories of "impulsive insanity," of the "destruction of moral balance by physical causes," of the "peculiar condition of the female mental organisation at the time of puberty," and a great deal more of the like verbiage, which is only to be excused as an expression of natural reluctance to admit that a young girl of fifteen, moving in respectable society, could be so utterly depraved and completely abandoned to the dictates of evil. This last confession must at once and for ever silence such mistaken twaddle. Murder is a crime, not a disease. In ninety-nine cases out of a hundred, "the impulse to kill" is the expression of an evil moral nature, and not of diseased brain or of ovarian irritation; and if the medical profession give their sanction to theories of the latter kind they inflict a great wrong on society. However deeply rooted in the nature of man is the conviction of moral responsibility, there is no conviction of which cruel and brutal natures

would sooner divest themselves; and the best way to encourage crime of the worst character in the reading ranks of life is to promulgate the "couldn't help it" doctrine, taking care to invest it with the authority of science. Constance Kent's confession completely brushes away all the fine-spun cobwebs which pseudo-philanthropists and philosophers have been spinning about her case. The culprit owns her motive—the old-fashioned one of jealousy and revenge—and describes the consummate craft, subtlety, and cruelty with which she accomplished her purpose—a purpose which she had nursed for a long period, and which she would never have confessed had not her dormant better nature—of which no human being is utterly destitute—been awakened by the teachings of religion.

Dr. Bucknill, whilst he throws any suspicion of insanity in the case to the winds, yet thinks, "that, owing to the peculiarities of her constitution, it is probable that under prolonged solitary confinement she would become insane." He goes on to say that "the validity of this opinion is of importance now that the sentence of death has been commuted to penal servitude for life; for no one could desire that the punishment of the criminal should be so carried out as to cause danger of a further and greater punishment not contemplated by law." We are quite ready to concede to Dr. Bucknill that Miss Constance Kent's history shows that she has "a peculiarity of disposition" which seems to us, however, to be peculiar only in strength of will and depravity; but that, because her early girlhood was blackened by a great crime, conspicuous for the coolness, determination, and circumspection with which it was executed, she is more likely to go mad than other criminals, we do not see. We sincerely hope that the accounts we have heard of Constance Kent's penitence may be true, but we should be sorry to see her let loose on society on the ground that insanity might be produced by prolonged confinement. There is really but one party to be considered in the matter. Public safety and public justice require that such criminals as Miss Kent should not only be punished, but restrained from committing further crimes. Although in the course of their punishment insanity should arise, the infliction of a just sentence is not to be suspended or relaxed on such a possibility. We may also remind Dr. Bucknill that penal servitude and solitary confinement for life are by no means one and the same thing.—*Medical Times and Gazette*, Sept. 2nd.

#### *Justice to Criminal Lunatics.*

On the 29th July, we commented on the case of George Broomfield, who had been tried for murder and left for execution—the

man being a manifest lunatic. Notwithstanding his trial by judge and jury, the man has since been reprieved and converted into a criminal lunatic. Again, on August 3rd, a man was tried for murder of his wife. The crime of murder, and the responsibility of the murderer, according to law, were as certain and clear in this case as in the case of Broomfield ; but Mr. Justice Montague Smith saw the case in a different light from the judge who tried Broomfield, and actually stopped the trial ; and the man was acquitted on the ground of insanity.

We venture to think that, in both these cases, there is a grievous miscarriage of justice ; and that the conclusions arrived at in both cases must tend to bring judge and jury and criminal law into disrepute. In the case of Broomfield, the man, *after* being tried by judge and jury, is again tried by a Government expert (whose name even does not appear) ; and by the sentence of this expert is upset the solemn verdict of the jury.

This sort of upsetting of justice is becoming an everyday occurrence ; and it will continue to be so, until Government has the good sense to send an expert in lunacy to examine and give evidence in court concerning the mental condition of criminals, who are supposed to be, or who are, lunatic. What can be more outrageous to reason and justice—more brutal, we might say—than to throw upon a lunatic the *onus probandi* his lunatic state of mind ? What, again, can be more dissonant from our English idea of administering justice, than that the verdict of the jury should be reconsidered and settled *after trial* by an unknown and irresponsible lunacy expert ? What can more tend to throw the opinions of judges and the verdict of juries into disrepute—to render justice uncertain—than the fact that, after the solemn judicial trial of a criminal, he is to be tried again in private by an individual who is responsible to no court of law ? Is it not a scandal to our laws that cases of such kind should be now of constant occurrence ? Smethurst, for example, was condemned to death by judge and jury ; but his fate was finally decided by a report of the late Sir B. Brodie, who thus revised the jury's verdict ! Consider, again, the scandal of Townley's case. He is first made a lunatic by the jury and sent to a lunatic asylum ; and afterwards declared sane by Government experts, and sent from the lunatic asylum into penal servitude for life.

All such constantly recurring scandals to justice can be prevented by making the impartial Government expert give his evidence in court during the trial, and, therefore, of course, before the jury deliver their verdict. Such a course of proceeding is demanded by humanity as well as by justice. Humanity requires that a skilled and impartial inquirer should investigate and report upon the condition of supposed criminal lunatics ; and save them—if they be

really lunatic in the eyes of science—from the hangman's hands. Why should a poverty-stricken wretch be put in a worse position than the rich criminal who is able to fee heavily some high authority in lunacy? And again, justice demands, on the other side, that criminals who have the means of paying heavy fees in order to bring witnesses with high names into court, should not thereby escape the just reward of their crimes. Justice demands that, in such cases also, an impartial Government expert should be there to counteract the evidence of the authoritative names; *i.e.*, if the evidence be guided by party considerations rather than by the actual facts of the case.—*British Medical Journal*, Sept. 2nd.

### *The Legal View of Insanity.*

*To the Editor of 'The Lancet.'*

SIR,—At Winchester, on July 16th, George Broomfield was found guilty of murder. He was ably defended by Mr. Coleridge, Q.C., on the ground of insanity. It was proved in evidence that two years previously he had been shot in the head, and had since been a “changed man;” that he had delusions and suicidal impulses; and that at this moment he is half dead from the effects of a shot-wound inflicted upon himself. The counsel for the crown made no attempt to rebut the evidence of Dr. Tweed, and that of a crowd of other witnesses who deposed to the insanity of the prisoner; nevertheless the learned judge, in his summing-up, told the jury that “it was not every aberration of mind that would free the prisoner—it must be such an aberration of intellect as to disable him from distinguishing between right and wrong.” Under this ruling the jury returned a verdict of “guilty,” and the poor lunatic criminal, whose own only plea was, “I wish to die,” is duly sentenced to be hanged.

The same eloquent counsel, before the same judge, will, on Saturday, plead in behalf of Miss Constance Kent. It is possible that in her case the defence of insanity may be set up, and may be equally justified; nevertheless it is clear that, whether insane or not, she must be condemned to death on her own confession, by making which she herself shows her full appreciation and knowledge of the difference between right and wrong. Surely there must be some grave mistake as to the value of a test that inevitably sends the possibly insane daughter of an insane mother to die upon the scaffold. That it is practically fallacious must be shown by the fact that, standing by her side, condemned in the same week by the same judge, will be found another unhappy homicide, admittedly suffering under mental disease arising from physical injury to the brain,

and yet to be executed because no one can give evidence as to his want of knowledge of the difference between the right and the wrong.

The conflicts of opinion between law and medical knowledge, and the jarring of legal dogmas with scientific truths as to the responsibility of the insane, are deeply to be deplored; but there is another aspect of the case of almost equal importance.

If Mr. Justice Keating should draw the attention of the Home Secretary, as Mr. Baron Martin did in the case of Victor Townley, to the possible existence of insanity in one or both of these criminals, their lives will be spared, otherwise the law will take its inexorable course.

It is obvious that under this form of procedure, the judge has in every case, in which a capital crime has been committed by a lunatic, the power of life or death in his own hands; he may charge the jury in such a way as to almost compel their verdict of guilty, and then privately inform the authorities at the Home Office that the convict is insane, and that his case requires further investigation.

Is it not contrary to the spirit of our law, is it not repugnant to our feelings of justice, to inflict capital punishment upon a man already suffering under the most terrible affliction that can befall humanity?

In these remarks I do not wish to reflect upon the judges, but upon the law, which, in this instance, appears to me to be altogether anomalous. The issue, one of life or death to the prisoner at the bar, should depend upon the jury; and the questions for them to decide ought to be—first, whether the prisoner alleged to be insane is guilty upon the evidence, and secondly, whether it is proved to their satisfaction that he is not of sound mind.

Under the present system the last issue is practically left with the judge, who may or may not think it expedient that lunatics should be put to death; and as on this question judges may differ, like other men, the infliction of capital punishment in any particular case of homicidal lunacy is uncertain. The sanity or insanity of the prisoner is not decided by the jury; they are directed only to try an issue which no finite mind can determine—namely, whether a lunatic at a particular moment had a mind sufficiently sound to know the difference between the right and the wrong.

The question as to the infliction of capital punishment is distinct from that of capitally punishing lunatics. If there be even a doubt as to Miss Kent's condition of mind I hope her life will be spared. As to poor Broomfield, the law may surely forego its vengeance; it can serve no purpose to strangle to death a man admitted to be the victim of a mysterious disease, which affects, more or less, the

intellect, the moral feelings, and the will, because it is imagined that so much of these remains to him that his mind can tell the difference between right and wrong. There is little doubt that he does know the difference between right and wrong. But his mind and will are diseased ; he could not restrain his suicidal impulses—he could not overcome delusive impressions ; and it is almost certain that mental disease led him to commit a cruel and useless homicide.

I am, Sir, your obedient servant,

HARRINGTON TUKE, M.D.

*The Lancet*, July 22nd, 1865.

### *Cardinal Wiseman on Hamlet.*

I REMEMBER an anecdote of Garrick, who, in company with another performer of some eminence, was walking in the country, and about to enter a village. "Let us pass off," said the younger comedian to his more distinguished companion, "as two intoxicated fellows." They did so, apparently with perfect success, being saluted by the jeers and abuse of the inhabitants. When they came forth at the other end of the village, the younger performer asked Garrick how he had fulfilled his part. "Very well," was the reply, "except that you were not perfectly tipsy in your legs."

Now, in Shakespeare there is no danger of a similar defect. Whatever his character is intended to be, it is carried out to its very extremities. Nothing is forgotten, nothing overlooked.

Many of you, no doubt, are aware that a controversy has long existed, whether the madness of Hamlet is intended by Shakespeare to be real or simulated.

If a dramatist wished to represent one of his persons as feigning madness, that assumed condition would be naturally desired by the writer to be as like as possible to the real affliction. If the other persons associated with him could at once discover that the madness was put on, of course the entire action would be marred, and the object for which the pretended madness was designed would be defeated by the discovery. How consummate must be the poet's art, who can have so skilfully described, to the minutest symptoms, the mental malady of a great mind, as to leave it uncertain to the present day, even among learned physicians versed in such maladies, whether Hamlet's madness was real or assumed.

This controversy may be said to have been brought to a close by one of the ablest among those in England, who have every opportunity of studying the almost innumerable shades through

which alienation of mind can pass.\* And so delicate are the changeful characteristics which Shakespeare describes, that Dr. Conolly considers that a twofold form of disease is placed before us in the Danish prince. He concludes that he was labouring under real madness, yet able to put on a fictitious and artificial derangement for the purposes which he kept in view. Passing through act by act, and scene by scene, analysing with experienced eye each new symptom as it occurs, dividing and anatomatising, with the finest scalpel, every fibre of his brain, he exhibits, step by step, the transitional characters of the natural disease, in a mind naturally, and by education, great and noble, but thrown off his pivot by the anguish of his sufferings and the strain of aroused passion. And to this is superadded another and not genuine affection, which serves its turn with that estranged mind when it suits it to act, more especially that part which the natural ailment did not suffice for.

Now, Dr. Conolly considers these symptoms so accurately as well as minutely described, that he throws out the conjecture that Shakespeare may have borrowed the account of them from some unknown papers by his son-in-law, Dr. Hall.

But let it be remembered that in those days mental phenomena were by no means accurately examined or generally known. There was but little attention paid to the peculiar forms of monomania, or to its treatment, beyond restraint and often cruelty.

The poor idiot was allowed, if harmless, to wander about the village or the country to drivel or gibber amidst the teasing or ill-natured treatment of boys or rustics. The poor maniac was chained or tied in some wretched out-house, at the mercy of some heartless guardian, with no protector but the constable. Shakespeare could not be supposed, in the little town of Stratford, nor indeed in London itself, to have had opportunities of studying the influence and the appearance of mental derangement of a high-minded and finely-cultivated prince. How, then, did Shakespeare contrive to paint so highly-finished and yet so complex an image? Simply by the exercise of that strong sympathetic will which enabled him to transport, or rather to transmute himself into another personality. While this character was strongly before him, he changed himself into a maniac; he felt intuitively what would be his own thought, what his feelings, were he in that situation; he played with himself the part of the madman, with his own grand mind as the basis of its action; he grasped on every side the imagery which he felt would

\* 'A Study of Hamlet,' by John Conolly, M.D., London, 1863. In page 52 the author quotes Mr. Coleridge and M. Killemain, as holding the opinion that Shakespeare has "contrived to blend both feigned and real madness in the extraordinary character of Hamlet; and to join together the light of reason, the cunning of intentional error, and the involuntary disorder of a soul."

have come into his mind, beautiful even when dislarded, sublime even when it was grovelling, brilliant even when dulled, and clothed it in words of fire and of tenderness, with a varied rapidity which partakes of wildness and of sense. He needed not to look for a model out of himself, for it cost him no effort to change the angle of his mirror and sketch his own countenance awry. It was but little for him to pluck away the crown from reason and contemplate it dethroned.

Before taking leave of Dr. Conolly's most interesting monograph, I will allow myself to make only one remark. Having determined to represent Hamlet in this anomalous and perplexing condition, it was of the utmost importance to the course and end of this sublime drama, that one principal incident should be most decisively separated from Hamlet's reverse of mind.

Had it been possible to attribute the appearance of the ghost, as the queen, his mother, does attribute it in the fifth act, to the delusion of his bewildered phantasy, the whole groundwork of the drama would have crumbled beneath its superincumbent weight.

Had the spectre been seen by Hamlet, or by him first, we should have been perpetually troubled with the doubt whether or not it was the hallucination of a distracted or the invention of a deceitful brain. But Shakespeare felt the necessity of making this apparition be held for a reality, and therefore he makes it the very first incident in his tragedy, antecedent to the slightest symptom of either natural or affected derangement, and makes it first be seen by two witnesses together, and then conjointly by a third unbelieving and fearless witness. It is the testimony of these three which first brings to the knowledge of the incredulous prince this extraordinary occurrence. One may doubt whether any other writer has ever made a ghost appear successively to those whom we may call the wrong persons, before showing himself to the one whom alone he cared to visit. The extraordinary exigencies of Shakespeare's plot rendered necessary this unusual fiction. And it serves, moreover, to give the only colour of justice to acts which otherwise must have appeared unqualified as mad freaks, or frightful crimes.

What Dr. Conolly has done for Hamlet and Ophelia, Dr. Bucknill had previously performed, on a more extensive scale. In his 'Psychology of Shakespeare,'\* he has minutely investigated the mental condition of Macbeth, King Lear, Timon, and other characters, In Hamlet he seems inclined to take a different view from Dr. Conolly, inasmuch as he considers the simulated madness the principal feature, and the natural unsoundness, which it is impossible to overlook, as secondary. But this eminent physician, well known for his extensive studies of insanity, bears similar testimony to the extraor-

\* Pages 58 and 100.

dinary accuracy of Shakespeare's delineations of mental diseases; the nicety with which he traces their various steps in one individual, the accuracy with which he distinguishes these morbid affections in different persons. He seems unable to account for the exact minuteness in any other way than by external observation.

He acknowledges that "indefinable possession of genius, call it spiritual tact or insight, or whatever term may suggest itself, by which the great lords of mind estimate all phases of mind with little aid from reflected light," as the mental instrument through which Shakespeare looked upon others at a distance, or within reach of minute observation.

Still he seems to think that Shakespeare must have had many opportunities of observing mental phenomena. I own I am more inclined to think that the process by which the genius of Shakespeare reached this painful yet strange accuracy, was rather that of introversion than of external observation. At any rate, it is most interesting to see eminent physicians maintaining, by some means or other, that Shakespeare arrived by some sort of intuition at the possession of a psychological or even medical knowledge, fully verified and proved to be exact by the researches, two centuries later, of distinguished men in a science only recently developed. Mrs. Jameson\* has well distinguished the different forms of aberration in Shakespeare's characters, when she says that "Constance is frantic, Lear is mad, Ophelia is insane."—*William Shakespeare. By His Eminence Cardinal Wiseman.* London, 1865.

### *The Westminster Review on Hamlet.*

ONE lesson which Shakespeare implicitly teaches, is a lesson of infinite tolerance as the result of deep insight and a comprehensive view. Heartily do we sympathise with Hamlet in his great sorrow and sore trial; we esteem the faithful friendship and admire the cool judgment of Horatio; the treachery of Laertes, so greatly provoked as he was by events, does not excite unmitigated horror and render him inexcusably hateful—his repentance we accept with sincere satisfaction; and even the wicked king inspires sorrow rather than anger, though we abhor his deeds, and as he kneels to pray we would certainly forgive his crime if the decision lay with us: believing that God will be kind to the wicked, as he has been kind to the good in making them good, we cannot give up the comforting hope that, after the day of retribution, the fratricidal king may find rest. No poet, save Goethe, thus approaches Shakespeare in the tolerant and emancipated point of view from which he contemplates humanity. On account of this surpassing excellence, some, fired by

\* 'Characteristics of Women,' New York, 1833, p. 142.

the restless presumption of their own infirmities, have dared to find fault with Shakespeare; they have blamed him because he has exhibited moral ugliness unveiled, because he was not sufficiently patriotic, and because he seemed more sceptical than was fitting. Imperturbable assurance! As if Shakespeare's far-seeing vision and penetrating insight could anywhere detect inexcusable vice; as if his mighty mind could be fettered by the littleness of scepticism, or could condescend to the selfishness of patriotism! Is it really a matter for regret to any mortal that Shakespeare has not given us the demented twaddle of the *Civis Romanus*?

From the evidence of his sonnets and of different plays—indeed, from the character of Hamlet himself—there can be no doubt that Shakespeare was at one time much tried, disheartened, and oppressed by the harsh experiences of life; he began, doubtless, as many others have done, by thinking life “a Paradise,” and found it, as others have done, “only a Vauxhall.” But as Goethe advanced from the storminess of Werter to the calmness of Faust, so did Shakespeare rise in a glorious development from the subjective character of Timon to that lofty and pure region of clear vision from which he contemplated the actions of men with infinite calmness. His practical life was correspondent; by bending his actions to the yoke of his intellectual life—by living, in fact, his philosophy—he was able to work steadily in the painful sphere of his vocation to the end which he had proposed to himself. If Hamlet is a reflex of Shakespeare’s character, it reflects a period ere it had attained to its full development—a stage in which the struggle between the feeling of the painful experiences of life and the intellectual appreciation of them as events was actively going on—in which his nature was not yet in harmony with itself; but the crowning development of his philosophy seems to have been to look on all events with a serene and passionless gaze as inevitable effects of antecedent causes—to be nowise moved by the vices of men, and to see in their virtues the evolution of their nature. It is a probable conjecture which has been made, therefore, that Hamlet was sketched out at an earlier period of his life than that at which it was published, and that it was kept by him for some time and much modified, the soliloquies and large generalisations being some of them perhaps thus introduced, and the action of the play thereby delayed. The Hamlet of his youth may thus have been alloyed with a more advanced philosophy, and a character progressively elaborated which seems almost over-weighted with intellectual preponderance. If this be so, it may account for the strange circumstance, that at the beginning of the play Hamlet is represented as wishing to go back to school at Wittenberg, when, as the graveyard scene proves, he must have been about thirty years of age.

The metaphysician who would gain a just conception of what human freedom is, could scarce do better than study the relations of the human will in the events of life as these are exhibited in the play of "Hamlet." It represents the abstract and brief chronicle of human life, and, faithfully holding the mirror up to nature, it teaches—better than all philosophical disquisition and minute introspective analysis can—how is evolved the drama in which human will contests with necessity. Struggle as earnestly and as constantly as he may, the reflecting mortal must feel at the end of all that he is inevitably what he is; that his follies and his virtues are alike his fate; that there is "a divinity which shapes his ends, rough-hew them as he may." Hamlet, the man of thought, may brood over possibilities, speculate on events, analyse motives, and purposely delay action; but in the end he is, equally with Macbeth, the man of energetic action, whom the darkest hints of the witches arouse to desperate deeds, drawn on to the unavoidable issue. Mighty, it must be allowed, is the power of human will; that which, to him whose will is not developed, is *fate*, is, to him who has a well-fashioned will, *power*—so much has been conquered from necessity, so much has been taken from the devil's territory. The savage prostrates himself, powerless, prayerful, and pitiable, before the flashing lightning; but the developed mortal lays hold of the lightning and makes of it a very useful servant; to the former, lightning is a fate against which will is helpless; to the latter, will is a fate against which lightning is helpless. What limit, then, to the power of will, when so much of fate is ignorance? The limit which there necessarily is to the contents of the continent, to the comprehended of that which comprehends it. The unrelenting circle of necessity encompasses all: one may go his destined course with tranquil resignation, and another may fume and fret and struggle; but, willing or unwilling, both must go. As the play of "Hamlet" so instructively teaches, notwithstanding all the ingenious refinements of a powerful meditation, the human will is included within the larger sphere of necessity or natural law. The cage may be a larger or a smaller one, but its bars are always there. "Where wast thou when I laid the foundations of the earth? Canst thou bind the sweet influences of Pleiades, or loose the band of Orion? Canst thou bring forth Mazzaroth in his season? or canst thou guide Arcturus with his sons? Then Job answered and said, Behold, I am vile; what shall I answer thee? I will lay mine hand upon my mouth." Well, then, is it for him who learns his limitation, to whom the dark horizon of necessity becomes the sunlit circle of duty.—*The Westminster Review*, January, 1865.

*The Medico-Psychological Association.*

THE Association of Medical Officers of Asylums and Hospitals for the Insane has done wisely in adopting Dr. Maudsley's resolution, proposed at its recent annual meeting, and changing its name to that of the Medico-Psychological Association. Were it only as a matter of convenience, the change was desirable ; but as the new name really expresses its essential scientific aim, rather than, as the old one did, an accidental feature in its operations, there are far higher reasons in its favour than mere convenience. It is obvious that there may be some interested in the scientific objects of the Association, and perhaps eminent in the department which it cultivates, who have no connection with any asylum, and who may willingly join its ranks now that the scope of its work is enlarged and its true scientific aim prominently expressed. Another step in advance which it has taken, in the appointment of many foreign honorary members, will probably be fruitful of good results. By including in its list of members, as it now does, all those in Europe and America who are distinguished in psychological medicine, it presents an excellent organization for the study and advancement of the special objects which it has in view. In the progressive specialization which inevitably takes place in the development of science as in the development of organic life, it is most necessary that there should be the means of effecting a due co-ordination of results ; and an essential pre-requisite to this end is a complete scientific intercourse between the different workers in different countries.

It is satisfactory to observe that the subjects which occupied the attention of the Association at its recent meeting were of an important practical character. The question of the condition of the insane in workhouses is one to which we have recently called earnest attention. Whether a few old and harmless imbecile patients may not properly be left in the workhouses is not a matter of very great moment ; but that it is entirely unjustifiable to keep in the workhouse for one hour longer than is absolutely necessary an acute case of insanity, any one who knows what are the requirements of treatment in such cases, and what workhouses at present are, must feel most strongly. It will be remembered that our commissioners, in the course of their inspection of workhouses, discovered such things as a patient suffering from recent acute insanity, whose treatment consisted of the ordinary diet of the house ; the plain meaning of which is, that just at the period when there is always the best hope, and often the only hope, of recovery through proper treatment, the unfortunate patient was, through official apathy or official neglect, left to degenerate into hopeless madness and to become a lasting

burden upon society. It would be impossible to pass too severe a censure on so grave, cruel, and foolish an injustice. The Commissioners in Lunacy have already expressed their fixed opinion that workhouses are not adapted by construction and management for the proper care of the insane; and the Medico-Psychological has done well to place on record a resolution to the like effect.

It is certainly very much to be regretted that the large amount of important material which the experience of different asylums must afford should hitherto have been of such comparatively little scientific use. One of the reasons why it has not been properly made use of, and cannot yet be made use of, is the want of a complete and uniform plan of recording asylum statistics. This was a subject urgently demanding immediate consideration; and we are glad to observe that the attention of the Association has been aroused to it, and that there is a fair prospect of something being done to make available for scientific purposes the experience of our numerous asylums. It may then, perhaps, be possible to settle the question, which yet remains undecided, whether insanity is really on the increase or not.—*The Lancet*, July 22, 1865.

#### *The "Restraint" System in French Public Asylums for the Insane.*

DR. LOCKHART ROBERTSON has forwarded to us an interesting paper—which we cannot print entire owing to heavy demands on our space—on the condition of the insane patients in two asylums belonging to the department of the Seine Inférieure. Considering that one of these asylums (that at Rouen) is under the care of M. Morel, and the other (that at Quatremares), under the superintendence of M. Dumesnil, it might have been supposed that the influence of these two enlightened physicians, whose reputation is European, would have availed to do away with the worst features of the dark times of alienist medicine. It is not so, however. Although the establishments in question appear to be favorable specimens of French county asylums, the general mode of treatment practised in them is such as would be considered a disgrace to any English provincial asylum. We regret to be obliged to draw this odious comparison, but it will be allowed that we are justified in making it when it is stated that restraint in its most objectionable forms seems to be the pivot on which all efforts at subduing the violence of the insane turn; that the value of food and alcohol in subduing maniacal excitement is unknown; that seclusion *for so long as two years* had been inflicted on two patients said to be suffering from nymphomania (!); that the rooms are crowded, bare, ill-ventilated, ill-furnished, and unprovided with means for washing; the beds wooden and cumbrous; and, what is as bad as anything, employment (except

among the quieter male patients at Quatremares, who are beneficially employed in garden work) almost *nil*. As we read of strait-jackets in which acute maniacs are confined *for months*, of torture inflicted (with the vain idea of controlling mania) by the continuous dropping of water on the head, of patients lying on dank urinous-smelling straw, and of other similar horrors, we seem unconsciously transported (as Dr. Robertson remarks) to the ghastly scenes of old Hanwell or old "Bedlam." And what strikes us with especial force, in these days of improved dietetic science, is the scanty and poor diet afforded to the insane—a class of persons whose condition demands generous nutriment more than almost any other.

It cannot be believed that two distinguished psychologists like MM. Morel and Dumesnil are willing parties to the continuance of so barbarous a state of things. We suspect (as the writer of the report on which we base these remarks seems to do) that the interference of lay governors, and above all of stupid old *réligeuses*, has more to do with its continued existence; and we would call upon the more enlightened of our French brethren to shake off the fetters which these and such as these would place on free medical thought and practice, and to insist that such scandals shall cease to disgrace France in the midst of the nineteenth century.—*The Lancet*, August 19, 1865.

### *Condemnation before Trial.*

THOUGHTFUL men have observed with pain and regret that of late an evil habit has grown up, on the part of certain newspapers, of passing judgment on a criminal before trial. Beginning commonly with an avowal that they do not wish to prejudge the case, they proceed forthwith to lay stress on every circumstance of aggravation, to slur over, or sneer at, every imaginable circumstance of extenuation, and to wind up with certain violent appeals to the good sense of the community as to the urgent necessity of saving society from the dangerous consequences of humanitarian zeal. They are not quite so logically extravagant as the judge whose wig lately suffered so severely in its conflict with the quaker's hat, and who on one occasion reached such a height of philosophy as to tell a jury that he was not sure whether it was not more necessary to punish a lunatic than a sane man, as far as the welfare of society was concerned, but they are aiming well to reach that height. Perhaps the worst of the sinners in this regard amongst the newspapers now is not the 'Daily Telegraph,' but the 'Saturday Review.' The 'Telegraph' sometimes shows that it has bowels of compassion and lucid intervals; but the chief glory of the 'Saturday Review' seems to be to display an unfaltering and unmitigated brutality, and

to be in a continual state of raving fury. The sublime arrogance of this journal, with the superficial show of learning and shallow pretence of philosophy, in which the immature precocity of some of its contributors is displayed, are generally amusing and harmless enough;\* but they are scarcely harmless when they are devoted to the deliberate purpose of fanning the popular resentment against some untried criminal, and of condemning, by means of gross misrepresentation, any sort of defence that the unhappy being may have to offer at his trial. Jurors are chosen from the class of people who read the '*Saturday Review*'; and to strive in every possible way to prejudice their minds against the prisoner, before they enter the box, and to undermine his possible line of defence, is an unworthy thing on the part of any journal. We really cannot see that any one should do under an anonymous mask, and when writing for so many guineas a sheet, what an honorable man would not dare to do in his own name, and what a humane man would refrain from doing, however much protected by secrecy. We know nothing more of the mental condition of the recent murderer, Southey, than what any one who has read the newspapers knows, and certainly do not regard him with any compassionate feeling, but we cannot but protest, in the name of justice and humanity, against the malignant spirit displayed by the '*Saturday Review*' against a prisoner not yet put on his trial, and against the unfair means which it has adopted to secure his condemnation. Such course of action will not, we are sure, in the end be of service to the cause of justice; for, if continued, it must inevitably end in moving other journals to take up the opposite side with an equally unscrupulous violence. And if, when there is a question of a prisoner's sanity, a scientific journal should take upon itself to discuss the matter at length before the trial, and to pronounce a decided opinion, it may be doubted whether even the rabid fury of the '*Saturday Review*' would suffice to neutralise the effect produced. Certainly the cause of justice would not gain by such proceedings.

We are sorry to see that the bad example set has been only too quickly imitated by a paper which usually preserves a far higher tone than the '*Saturday Review*'. The '*Pall Mall Gazette*', makes the following observations with regard to the last child murderer, who is now lying in prison awaiting her trial:—"We have neither the wish nor the inclination to prejudge the case of the miserable woman who has just killed her three children at Bankside, South-

\* A short time ago a writer of one of those tedious articles in the '*Saturday Review*', which aim at being essays tinged with philosophy, said, when speaking of the tendency which now exists to "whitewash" the great actors of the past, that it only remained that some one should take Judas Iscariot in hand with that aim. Of course a writer in the '*Saturday Review*' could not be expected to know what had long since been done by no less a person than De Quincey!

wark ; but it is so certain that the plea of insanity will be raised in her defence that it is as well to call attention at once to the class of cases of which Esther Lack furnishes quite a typical example. She is clearly one of those weak-minded murderers of whom it is difficult to say whether or not they are so mad that they actually have no such power over themselves as to be able to control the homicidal frenzy. But the point which it is so important to press on public attention is this, that the legal question is not whether such persons are the victims of a homicidal frenzy of the nature of madness, but whether they can be so influenced by the dread of punishment as to be deterred from the actual murderous deed. The medical question as to their sanity is one thing ; the legal question as to the possibility of terrifying them into self-control is another. The medical question has to be settled in the interests of science ; the legal question is solely concerned with the interests of society. Society, which desires to protect itself from murder, has nothing to do with the psychological or pathological phenomena of sanity, except so far as to learn whether or not insane people can be deterred from killing whomsoever they feel disposed to destroy. For all practical purposes we want to know nothing about defects in the reasoning processes of the insane. What we want to know is, whether their imagination can be so impressed with the fact that insane murderers are hanged as to set up such a counter emotion as will silence the whispers of insanity prompting to murder. Mad people, the doctors tell us, are haunted with hideous thoughts which overcome all the suggestions of natural affection, of reason, and religion. We grant it ; but in the common interest it is our aim to haunt their poor unhappy minds with some other hideous thoughts—whether of the gallows, or some other terrible vision—which will rise before their imaginations and crush the bloody impulses of disease. We repeat that we say and suggest nothing about the wretched woman Esther Lack. We only repeat that the duty of the law and its administrators is to save society from the crimes of the insane as well as from those of the sane. The law is not concerned with the moral nature of murder, but only with the murderer's acts. The stab of a weak-minded assassin is as deadly as that of a man of iron will, and all we desire is to be protected from it.”

These remarks hardly amount to anything else than a plain instruction to the jury who may have to decide upon the fate of Esther Lack to pronounce her guilty, though she may be insane. Then, if the unhappy lunatic be happily hanged at a time when many wise men doubt the policy of hanging any one, it may be that the mind of some other lunatic will be haunted with the terrible vision of the gallows, and that the bloody impulse of disease will be crushed. Although any one who has had a practical experience of insanity will at once recognise how absurdly fallacious such a notion

is, yet it is very unlikely that any amount of argument would convince the writer in the 'Pall Mall Gazette' that he is guilty of a terrible mistake in judging of the insane consciousness from the revelations of a sane consciousness. In sober truth, however, he would not be one whit more unphilosophical were he to maintain that the fear of punishment should be used to prevent the convulsion of epilepsy or the spasm of chorea, because it may be successfully used to restrain the mischievous hands of a schoolboy. If he is truly anxious to judge the insane justly, he would do well for the future to try to conceive their mental state by the revelations of his own consciousness in dreams, or to accept the experience of those who have given their lives to the study of insanity.\*

### *The trial of a Lunatic for Murder.*

THE following account of the trial of a lunatic for murder is interesting. The learned judge wisely stopped the trial, although it is probable that an ingenious counsel might have found in the prisoner's statements some ground for an argument that he knew the difference between right and wrong, as most lunatics notoriously do. "Something came over me. I seized my poor wife by the head, and knocked it against the flags again and again;" such is the articulate expression, as far as it can be articulately expressed, of that mental convulsion which in such case utters itself in homicide.

James Kelly was placed at the bar, charged with the wilful murder of his wife, Jane Kelly, at Butterworth, on the 11th of June.

It appeared that the prisoner and his wife lived together at a place called Three Lanes-end, some three miles from Rochdale, and about a quarter of a mile from a place called Hollingworth Lake, a reservoir of the Rochdale Waterworks, upon which a steamboat and pleasure-boats were placed, having stalls and shops upon the edge, and which was turned to a place of public amusement. The prisoner by trade was a factory operative, but of late years had made his livelihood almost entirely by playing the accordion and concertina, and collecting money at the Hollingworth Lake, and he had married, within two years, a young woman named Royd, who had previously kept the school at the Three Lanes-end, and whose mother owned the cottage in which they subsequently lived. It appeared that the prisoner had at times given way to excessive drinking, as he himself said on one occasion, in consequence of frequenting the pleasure

\* If anything could add force to these remarks, it is the result of the trial of Esther Lack, which has taken place since they were in type. The jury, before the termination of the evidence, expressed their opinion that she was insane; and in this opinion Mr. Justice Shee entirely concurred.

parties at the Lake, but he had taken the pledge and then broken it, and it was said that he had been drinking heavily from the Wednesday till the following Tuesday in the week previous to the time of the murder, which was very early on Sunday morning, the 11th of June. A Mrs. Whitehead and a Mrs. Butterworth, with their husbands, were neighbours of the Kellys, and on the previous Thursday, hearing screams in the prisoner's cottage, they hurried there together, and found that the prisoner had been attempting to strangle his wife, and there were red marks indicating it upon her neck. He said that he had been doing so, and that she "would have been done for in two minutes if they had not come in." It appeared that the prisoner then produced a paper and asked his wife to read it, saying that it was an agreement to be hung together, but she said that she was so faint that she could not then. She, however, said, in answer to him, that it was true that they had agreed to be hung together. The next thing seen of them was on the Saturday night (that of the murder), when he was at the Butterworths' house, and his wife came to seek him. He referred to what he had tried on the Thursday, then sang snatches of hymns, and starting to his feet exclaimed, when he was told to go and take some sleep, that his wife "should never close her eyes in this world till she closed them in eternity." Notwithstanding this extraordinary conduct, the witnesses said he seemed to be sober at the time, but he referred to drink, and when told to abstain from liquor and that it was not too late, he said that it was; he had "made a mockery of God so often that he would not take Him in again." After this behaviour Mrs. Butterworth tried to persuade Mrs. Kelly not to go home with her husband that night, but the latter said that she was not afraid of him, and she would go back with her husband, and they went home between seven and eight in the evening. Later in the night, about midnight, the prisoner's next door neighbour, a man named Gibson, while at supper, heard the prisoner call on the Lord, and on Jesus, and praying very loud. At three in the morning the deceased woman came to his door and called him, saying her husband was dying, and on going in found him in bed praying, waving his arms, and declaring that he was dying of *delirium tremens*, very young, at the age of thirty-four. The witness took his hand, and found it cold and clammy.

At this point of the evidence the prisoner, who had behaved rather restlessly all through, and is a sullen-looking man, laughed out loudly, and shouted out, "That's a thumper, that's a thumper for you." He was then quiet again, sometimes looking round the court, and sometimes resting his head on the dock.

The witness continued, that his wife said, "Now he mentions drink, I sent for some yesterday, and after taking it he became calm." The prisoner objected to having any drink sent for, and

said it was too late to have the doctor, and Gibson then went away, took a walk, and returning about five found the prisoner's door wide open as he passed it hastily to go into his own house. Mrs. Whitehead had also heard his shouting at 3 o'clock, and again at 5 o'clock further screaming and a groan. She looked out and saw Kelly washing his hands, which were bloody, in the well. He looked up at the house as he passed, and went away down the lane, having, it appeared, called at Gibson's for drink, but getting none and saying nothing more. Mrs. Whitehead gave the alarm, and the neighbours found the door of the prisoner's cottage wide open, with the feet of the body of the poor woman distinctly visible from the lane. The body was lain on its back, there being a night-dress on with a skirt over it, with many contusions on various parts of the head, face, and body, the jaw and collar-bone being broken, and a deep cut across the throat dividing the jugular. A large knife which had been wiped was lying on the breast, and the poker was found bloody, and a large iron candlestick was also found. The prisoner came along the road on the Sunday morning, towards Rochdale, and called at a man's house, a mile off, and asked for tobacco and to change hats with him. He was refused, and was found by a witness, who lived a little nearer to Rochdale, crouching in a pigstye, which was empty. Immediately he was seen he exclaimed, waving his hand, "Hush, hush, you mus'n't split and tell I am here." He gave the witness a shilling, asking him to get him some ale; but the latter having already heard of the murder, sent for assistance and took him into custody. He had blood upon his face and upon his clothes. One of the men said, "Kelly, you should not have done it." He said, "I have done it, and I shall have to stand the drop for it. I am one of the devil's children." He demanded the shilling back which he had given for drink. Dr. Lister was called to see him at the police station on the Sunday afternoon, and when he went in to him the prisoner started up and said, "Ah! its coming;" and on being asked, "What?" answered, "Sulphur," adding that it was "Delightful," and, on the whole, giving the witness the impression at that time that his excitement was assumed. He talked much in the same way on other occasions subsequently, but the witness's impression seemed to incline in favour of the prisoner's sanity, although he admitted having heard him make a speech on the operations of intemperance, when he warned them against drink, and related how he had been tempted by it to throw himself into the lake. To the police-superintendent he made the following statement, "It was'n't me; it was the devil. I had had half an hour's sleep, and I awoke when something came over me. I seized my poor wife by the head, and knocked it against the flags again and again. I then went out. She was not dead, but I could see nobody to whom I could report it.

When I returned she was not dead. I could not bear to see her suffering, so I took the carving knife. I was praying before then beautifully to Jesus, and spoke to my wife about Jesus. I had been dozing about half an hour, when something came over me." It appeared that the prisoner had great influence over his wife, who had said that she was willing to die at any time.

The defence was that of insanity. The prisoner had always been excitable and peculiar, and had been known in Skipton, where he was born, when a boy, as "Silly Jemmy." A person called Harrison, a calico-printer at Burnley, who had known him all his life, was called to prove his early history; and another, who kept galvanic baths and had patients under his care, spoke to treatment of him under distinct attacks of disease of the brain. He did not know that these attacks were after periods of drinking, nor that the prisoner had indulged in laudanum and other stimulants than mere drink. It was five years since he had taken the pledge, but he had frequently broken it since, besides drinking much in the early part of his life. Other witnesses were called to prove his excitability and peculiarity at earlier periods of his life. A secretary to a temperance association proved that he travelled a regular circuit of temperance meetings, playing his accordion and addressing the audiences. Finally, Dr. Bromwell, medical officer to the Burnley Union, proved having attended the prisoner some years ago, and gave it as his distinct opinion that he was then suffering from physical disease of the brain.

After this evidence, his Lordship asked the learned counsel for the Crown whether it was desirable to proceed further, and Mr. Kay at once acceding to the suggestion, it was left to the jury to find whether the prisoner was insane or not, and they immediately returned a verdict of *Acquittal* on the ground of insanity.

His Lordship ordered the prisoner to be detained during Her Majesty's pleasure.

### *Earl Russell on Capital Punishment.*

EARL RUSSELL, in his introduction to the new edition of his work on the 'English Constitution' (1865), thus expresses himself as being favorable to the abolition of capital punishment :

"For my own part I do not doubt for a moment either the right of a community to inflict the punishment of death, or the expediency of exercising that right in certain states of society. But when I turn from that abstract right and that abstract expediency to our own state of society—when I consider how difficult it is for any judge to separate the case which requires inflexible justice from that

which admits the force of mitigating circumstances—how invidious the task of the Secretary of State in dispensing the mercy of the crown—how critical the comments made by the public—how soon the object of general horror becomes the theme of sympathy and pity—how narrow and how limited the examples given by this condign and awful punishment—how brutal the scene at the execution—I come to the conclusion that nothing would be lost to justice, nothing lost in the preservation of innocent life, if the punishment of death were altogether abolished.

“In that case a sentence of a long term of separate confinement, followed by another term of hard labour and hard fare, would cease to be considered as an extension of mercy. If the sentence of the judge were to that effect, there would scarcely ever be a petition for remission of punishment, in cases of murder, sent to the Home Office. The guilty, unpitied, would have time and opportunity to turn repentant to the Throne of Mercy.”

#### *Dr. Symonds on Medical Evidence in Relation to State Medicine.*

AFTER a learned and highly interesting lecture on certain points of the English language, delivered at the Bristol Institution, by the Rev. J. Earle, formerly Professor of Anglo-Saxon at Oxford, a vote of thanks to the lecturer was proposed by a legal friend, a gentleman not more eminent by the high office which he holds, than distinguished by the ability and philanthropic zeal with which he has instigated various social reforms. In the course of some most valuable remarks on language, he said that those spoke best, and with most clearness and precision, who thought least of the effect which what they were saying would produce upon their hearers; and he declared that it was the want of such unconsciousness that made medical witnesses the worst of all witnesses in courts of law. And he clenched his remarks by alluding with playful malice (seeing that many of his medical friends were present) to a very sarcastic account of medical evidence in cases of lunacy with which a Lord Chancellor amused the House of Lords a few years ago. It happened to be my duty to second the vote of thanks; and I should have been a recreant, had I not availed myself of the opportunity of endeavouring to wipe away the aspersions cast by my learned friend on the character of medical witnesses. I ventured to say that, whatever psychological or philological truth there might be in the remark that a speaker should be free from self-consciousness or thought in regard to the effect of his words, yet my learned friend had omitted to mention the chief cause of the disadvantageous figure made by medical witnesses, which was, that they had to speak of things about

which their audience, including the simple-minded jurors, the quick-witted gentlemen of the bar, and even the august occupants of the bench, were profoundly ignorant ; and, moreover, that such witnesses had to translate as they were speaking, to put aside the language in which their professional knowledge and ideas most naturally flowed, and to accommodate what they had to say not only to the un instructed understanding of their hearers, but also to the vernacular language ; that, in the course of this process, much might be lost both of force and accuracy ; and that the process required some presence of mind, especially under cross-examination, which mental quality was not likely to be aided by a severe injunction from the bench to give a plain answer to a plain question, or by an ironical petition from counsel that the witness should for the time being dis-encumber himself of his superfluous learning, and condescend to the language of ordinary mortals. And, as to the allusion to the Lord Chancellor's mocking description of medical evidence, I could only say that, till I read his lordship's speech, I did not think that even a Lord Chancellor could, upon a medical subject, display so singular a lack of information. After the meeting, my friend told me that what I had said was not only fair in the way of retort upon an antagonist, but also that it was strictly and literally true.

There is one kind of evidence which is being continually demanded of a medical man in respect to the administration of the law, which, although it is not given in a court of law, may at any time be the means of taking him into it, and even of causing him to appear as a defendant or culprit rather than as a witness. I refer to certificates of insanity. On this subject, I confess that I marvel at the long suffering—I should almost say the stolid supineness, the pachydermatous patience—of the profession. By these certificates we confer inestimable boons—first on the family of the patient, by separating a member whose presence is distressing and often absolutely dangerous to that family ; on the patient himself, by removing him to a place where he may have the best chance of cure, or be best cared for ; and on the public, to whom the liberty of the patient might bring peril of life and prosperity. And for these services medical practitioners are liable to be held up to public scorn and obloquy as conspirators with mad doctors, as they are called by a vulgar and insulting metonymy, and even to be sued in courts of law for damages. How long the patience of the profession will allow itself to be thus abused, I know not ; but it seems to me that, whether or not any other changes be effected in the collection of medico-legal evidence, the profession should, if it have any self-respect, move for a change in the law as to these certificates. If they are still to be signed by ordinary practitioners, it might not unreasonably be stipulated that indemnity should go with the signatures. In signing such a certificate, according to the best of his knowledge and belief and con-

science,—a certificate involving, though it does, the personal liberty of a fellow-subject,—the practitioner ought not to incur more risk than when he signs a prescription, on the issues of which attend not only the well-being and the life of the patient, but the maintenance of a family, its happiness, and that of circles of indefinite extent. The public have a sufficient security that such certificates will be carefully considered, in the disgrace that is the inevitable portion of those who have signed them in bad faith, or even without proper caution. Unless the law is altered, I think that the members of our profession would be justified in binding themselves by an engagement to one another, to refuse to sign all such certificates. The legislature could not compel us to sign them. Let it provide officers for that onerous and dangerous duty. But although by our passive resistance we could prevail, I trust that no such unseemly contention may be forced upon us.—*British Medical Journal*, Sept. 2nd, 1865.

### *Dr. Lalor on Puerperal Insanity.*

“THE general proposition, then, as to the absence of danger to life, and the almost absolute certainty of recovery of reason in cases of acute puerperal insanity, attended by little disturbance of the circulation, as laid down by Gooch, agrees with my own experience. Further, abstracting these cases with serious complications from the entire nineteen cases under consideration, we have remaining sixteen cases of acute uncomplicated puerperal mania; and of these fifteen recovered and one died, being at the rate of  $93\frac{2}{5}$ ths per cent. of recoveries, and  $6\frac{4}{5}$ ths per cent. of deaths. I believe that at the present day there is no such prevalent belief amongst medical men as was held in Dr. Gooch’s recollection (and indicated by the saying of Dr. Baillie which I have quoted), viz.:—‘That disorders of the mind in lying-in women are never fatal.’ If any one retains such a belief, the results just stated are amply sufficient to disprove it, and my paper will not be entirely useless if it should remove a very serious error of opinion from the mind of a single practitioner of medicine, at the same time, if my later amended analysis, confined to cases of uncomplicated puerperal mania, offers a more legitimate deduction from fitting facts than that presented by my first statement, of the gross results in all cases, whether simple or complicated, a more hopeful view may be taken of the disease in that form which I believe was alluded to by Drs. Hunter and Gooch, in the propositions which I have brought under the notice of the society, than was put forward by those eminent authorities in these propositions. Nevertheless, acute puerperal insanity, occurring within

the month after childbirth, even when uncomplicated and brought under treatment within a month after its commencement, should not be considered otherwise than as a very serious disease; and I consider the results I have just stated in sixteen cases as, on the whole, satisfactory. That they were so satisfactory is, I think, attributable to the discriminative administration of nutritious food and stimulants, and to a like avoidance of lowering and depleting measures. This was the plan of treatment recommended by Dr. Gooch himself, and generally followed at the present day, and in the advocacy of which I do not assume to be at all peculiar, or to have any other merit than that of following the track which the general experience of the profession has pointed out as the best and safest."—*Practical Remarks on Puerperal Insanity.*

### *The Study of Mental Diseases.*

At the annual meeting of the Convocation of the University of London, held at Burlington House on the 9th of May, a recommendation was brought up from the Annual Committee by Dr. Maudsley and Dr. Anstie, that Convocation should propose to the Senate the adoption of regulations by which candidates for the first M.B. examination would be required to produce evidence of having attended a course of clinical instruction in mental diseases. The proposition was warmly supported by Dr. Sibson and Dr. Graily Hewitt, and was unanimously adopted by Convocation. We have already published a full statement on this subject, and have expressed the reasons which prevail in urging the adoption of this measure. It is one of much importance. The clinical study of the physical and psychological aspects of insanity is one of the most important requirements in the training of the physician, who can never pass through a career of practice without being called upon to minister to the mind diseased by the affections of the brain, its physical organ. In requiring clinical study of mental disease as a part of the preliminary education for the M.B. degree, the University of London will give additional evidence of their desire to render that diploma thoroughly indicative of a careful training to medicine and of a satisfactory knowledge of its most important departments.—*The Lancet*, May 13.

### *Publications Received, 1865.*

(Continued from the 'Journal of Mental Science,' July, 1865.)

'An Examination of Sir W. Hamilton's Philosophy, and of the Principal Philosophical Questions Discussed in his Writings.' By John Stuart Mill, M.P. for Westminster. Second Edition. Longmans, 1865, pp. 561.

'Recent British Philosophy: a Review with Criticisms, including some Comments on Mr. Mill's Answer to Sir William Hamilton.' By David Masson. Macmillan and Co., 1865, pp. 414.

*These two books will be fully reviewed in our next number (January, 1866).*

'A Manual of Practical Hygiene, intended especially for the Medical Officers of the Army.' By E. A. Parkes, M.D., F.R.S., Professor of Military Hygiene in the Army Medical School. With numerous plates and woodcuts. John Churchill and Sons, 1865.

*This most exhaustive and able treatise on Sanitary Science will be reviewed, especially in reference to the sanitary arrangements of Lunatic Asylums, in our next number (January, 1866).*

1. 'Nineteenth Report of the Commissioners in Lunacy to the Lord Chancellor.' Ordered by the House of Commons to be printed June 20th, 1865, pp. 96.

2. 'Seventh Annual Report of the General Board of Commissioners in Lunacy for Scotland.' Presented to both Houses of Parliament by command of Her Majesty. Edinburgh, 1865, pp. 263.

3. 'The Fourteenth Report of the District Criminal and Private Lunatic Asylums in Ireland.' Presented to both Houses of Parliament by command of Her Majesty. Dublin, 1865, pp. 134. *See Part II, Reviews.*

'Congrès Médical de France.' 2e session. Tenué à Lyon, du 26 Septembre au 1er Octobre, 1864. Paris, 1865, pp. 688.

*This volume contains, on the eleventh question debated at the Congress, a long Report of the discussion of the question of providing further accommodation for the Insane Poor, either in Private Dwellings or in Agricultural Lunatic Colonies. An eloquent speech by our Associate Baron Mundy, M.D., opened the debate. We shall revert to this discussion in our next Report on French Psychological Literature.*

'On the Efficacy of the Bromide of Potassium in Epilepsy and Certain Psychical Affections.' By S. W. Duckworth Williams, M.D., Late Acting Medical Superintendent and formerly Assistant Medical Officer General Lunatic Asylum, Northampton. John Churchill and Sons, 1865 (pamphlet).

'Thoughts on Mind and its Derangements, with Hints to the Friends of Patients.' By William Stamer Stanley, L.K. and Q.C.P.I., M.R.C.S. Eng., &c. Dublin, 1865 (pamphlet).

'Notes of a Visit to some of the Northern and Midland County Lunatic Asylums.' By Robert Boyd, M.D. Edin., F.R.C.P. Wells, 1865 (pamphlet).

*Well worth reading by every Asylum Superintendent.*

'Blood-relationship in Marriage considered in its Influence upon the Offspring.' By Arthur Mitchell, A.M., M.D., Deputy Commissioner in Lunacy for Scotland.

(*A Reprint from the 'Edinburgh Medical Journal,' March, April, and June, 1865.*)

'The Druids.' By J. Stevenson Bushnan, M.D. (Read before the Wiltshire Archaeological Society, Salisbury, 1865).

### *County Asylum Reports, 1864-5.*

(Concluded from the '*Journal of Mental Science,*' July, 1865.)

51. Pauper Lunatic Asylum for the County of Northumberland. Reports and Accounts for 1864. Printed by order of the Court of Quarter Sessions.
52. Medical Report of the Royal Lunatic Asylum, Aberdeen, 1865.
53. Annual Report of the York Lunatic Asylum for the year 1865.
54. The Sixty-ninth Report of the Friends Retreat, near York, 1865.
55. Second Annual Report of the Argyll District Asylum for the insane, 1865.
56. Twenty-fifth Annual Report of the Crichton Royal Institution Hospital for the Insane, Dumfries, November 11th, 1864.
57. Report of the Armagh District Lunatic Asylum, for the year ending December 31st, 1864.
58. Thirty-fifth Annual Report of the Belfast District Hospital for the Insane Poor, 1865.

### *Appointments.*

W. H. Clarke, M.R.C.S.E., has been appointed Assistant Medical Officer to the Dorset County Lunatic Asylum, Dorchester.

J. H. Davidson, M.D. Edin., has been appointed Assistant Medical Officer of the Birmingham Borough Lunatic Asylum.

R. B. Gittand, M.D., has been appointed Assistant Medical Officer at the Essex County Lunatic Asylum, Brentwood.

A. R. Harrison, M.D. St. And., has been appointed Medical Superintendent of the Lunatic Asylum at Adelaide.

W. J. Marsh, M.R.C.S.E., has been appointed Assistant Medical Officer of the Nottingham County and Borough Lunatic Asylum.

W. T. Pater, M.R.C.S.E., has been appointed Assistant Medical Officer to the County Lunatic Asylum at Knowle, Fareham.

Alexander Ingram Spence, M.D. Edin., has been appointed Assistant Physician to the Royal Edinburgh Asylum at Morningside.

*Obituary.*

At Naples, August 22nd, Robert Wollaston, M.D., M.R.C.P., late Visiting Physician to the Coton Hill Asylum, Stafford, aged 64.

*Notice to Correspondents.*

English books for review, pamphlets, exchange journals, &c., to be sent either by book-post to Dr. Robertson, Hayward's Heath, Sussex; or to the care of the publishers of the Journal, Messrs. Churchill and Sons, New Burlington Street. French, German, and American publications may be forwarded to Dr. Robertson, by foreign book-post, or to Messrs. Williams and Norgate, Henrietta Street, Covent Garden, to the care of their German, French, and American agents, Mr. Hartmann, Leipzig; M. Borrari, 9, Rue de St. Pères, Paris; Messrs. Westermann and Co., Broadway, New York.

The copies of *The Journal of Mental Science* are regularly sent by Book-post to the ordinary Members of the Association, and to our Home and Foreign Correspondents, and we shall be glad to be informed of any irregularity in their receipt.

*United States of America.*—We are frequently compelled to refuse *American Asylum Reports*, on which an extra postage of 8d. is demanded. Messrs. Westermann, Broadway, New York, will forward any parcels for the 'Journal of Mental Science,' addressed to the care of Messrs. Williams and Norgate, London.

The following EXCHANGE JOURNALS have been regularly received since our last publication:

The *Annales Medico-Psychologiques*; the *Zeitschrift für Psychiatrie*; the *Correspondenz Blatt der deutschen Gesellschaft für Psychyatrie*; *Archiv für Psychiatrie*; the *Irren Freund*; *Journal de Médecine Mentale*; *Archivio Italiano per le Malattie Nervose e per le Alienazioni Mentali*; *Medizinische Ahrenlese*; *Medizinische Jahrbücher*; *Zeitschrift der K. K. Gesellschaft der Aerzte in Wien*; the *Edinburgh Medical Journal*; the *American Journal of Insanity*; the *British and Foreign Medico-Chirurgical Review*; the *Dublin Quarterly Journal*; the *Medical Mirror*; the *Social Science Review*; the *Ophthalmic Review: a Quarterly Journal of Ophthalmic Surgery and Science*; the *British Medical Journal*; the *Medical Circular*; and the *Journal of the Society of Arts*.

*Dr. de Wolff, Halifax, Nova Scotia.*—Your letter of the 5th July has been received. The question has, by the Annual Meeting of this Association, been referred to the President (Dr. Wood) to deal with.

Fig. 1.

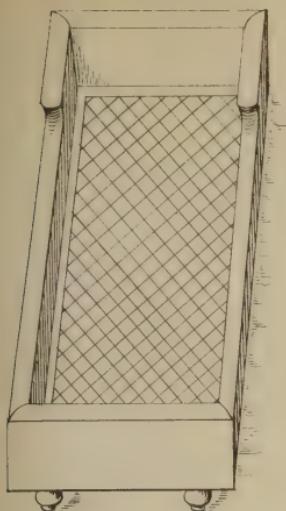


Fig. 2.

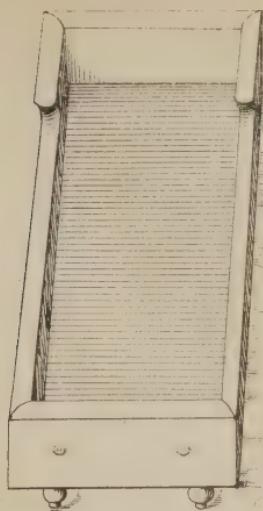


Fig. 1 represents the bedstead with the cane flap put down, and in position for use.

On the cane flap the bedding is placed. N.B. The finer the canework the better.

Fig. 2 represents the bedstead with the canvas expanded by the iron rods placed on either side; and which, passing from the head to the footboard preserve the same in situ.

Fig. 3.

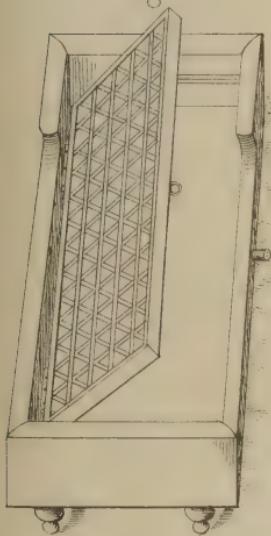


Fig. 4.

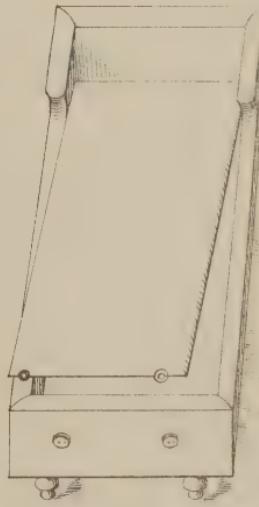


Fig. 3. In this drawing the cane flap is raised on its hinges; on one side is shown the bolt withdrawn, by means of which the flap is secured by an appropriate key, in its right place, when in use.

Fig. 4. In this drawing, the canvas, with the rods, by means of which it is extended, is raised, in order to show its relation to the contiguous parts. Like the cane flap, the canvas divides the depth of the bedstead into two unequal parts.



THE  
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VOL. XI.

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## PART I.—ORIGINAL ARTICLES.

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*On the Specific Gravity of different parts of the Human Brain.*

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THE question of the specific gravity of the brain has already engaged the attention of several British investigators, the results of whose labours have from time to time been made known, but with the exception of a few isolated observations little has been done to this subject by continental anatomists or pathologists. At a time like the present, when the attention of scientific men is directed with renewed interest to all details concerning weight, form, and configuration of the human brain, it seems reasonable to suppose that more complete observations upon the specific gravities of its several parts would be of itself a matter of scientific interest, independently of the importance attaching to the subject on account of the probable light which such an investigation might throw upon the *situations* of change in brain tissue, in connection with certain obscure forms of cerebral disease. The observations of previous inquirers have been directed to the estimation of the specific weights of the cerebrum and cerebellum as a whole, of the gray and white matter separately, and of the combined central ganglia of the cerebrum. These investigations have been made by some, upon the brains of sane, and by others, upon those of insane individuals; and amongst the forty persons whose brains I have myself examined, there are also representatives of these two classes, though a large majority is included under the former denomination. Whilst the actual number of brains inspected by myself is, therefore, limited, still the examination of their several parts has been more complete, so that this com-

munication contains a record not only of differences found to exist in the specific gravity of gray matter taken from frontal, parietal, and occipital convolutions respectively ; but, also, I believe for the first time, of the specific weights of the optic thalamis, pons, medulla oblongata, and different parts of the corpora striata, taken separately. Some of the facts so ascertained are very interesting, and seem to justify their early publication. Owing, also, to the existence of certain discrepancies in the results arrived at by preceding investigators and myself, it seems desirable that these discrepancies as well as our respective methods should be considered, with a view, if possible, of ensuring greater uniformity of results for the future. Investigations of a delicate nature such as these, when conducted by different observers, are comparatively useless for the purposes of comparison, unless some uniform method be adopted. These considerations have induced me to make known the results of my own observations sooner than I should otherwise have done, and will, I hope, be deemed a sufficient justification for my bringing them forward before they are sufficiently numerous to enable me to draw any very safe deductions from them. The present paper may, therefore, be considered as a first contribution towards the elucidation of a subject, at which I hope to work more thoroughly in the future.

Dr. Bucknill, whilst physician to the Devon County Asylum, was the first to institute a series of observations upon the specific gravity of the brain, with a view of estimating the amount of ‘relative’ atrophy of this organ in the insane, in conjunction with another series of experiments for determining the amount of ‘positive’ atrophy of the organ in the same individuals. His first communication on this subject, containing the results of the examination of thirty-two cases, is to be found in the ‘Asylum Report’ for 1852, and his next,\* giving the details of the examination of another thirty cases, was published during the same year. He ascertained the specific gravity by immersing portions of the encephalon in a solution of sulphate of magnesia, when by “adding water or a strong solution of the salt, until the cerebral mass hangs suspended in the fluid, without any tendency to float or sink ; and then by testing with the hydrometer, the specific gravity is thus found with great delicacy and facility, a difference of half a degree in the density of the fluid being indicated by the rise or fall of the substance immersed.”

In this second and more complete series of thirty cases—all chronic, and including instances of dementia, imbecility, idiocy, chronic mania, melancholia, epilepsy, and general paralysis—the average specific gravity of the cerebrum was found to be 1·0409, the extremes being 1·036 and 1·046 ; and of the cerebellum the average was 1·043, the

\* ‘Lancet,’ Dec. 25, 1852, p. 588.

extremes ranging between 1·039 and 1·046. In the first series, containing a few acute cases, the specific gravity of the cerebrum varied between 1·036 and 1·052, the mean being 1·041; whilst that of the cerebellum varied between 1·037 and 1·053, its mean being 1·042. Unfortunately, however, these results, as far as the cerebrum is concerned, are rendered comparatively valueless, owing to the method adopted. Dr. Bucknill says:—"In many instances I took the specific gravity of the whole organ, but finding it was invariably lower than any of its parts, and that it was impossible to free so large a mass from air bubbles, I discarded the results as untrustworthy;" and further on he states that the figures in his tables "refer to large pieces of brain containing a fair proportion of vesicular and tubular substance." This is, indeed, as unsatisfactory a process as the other, since subsequent observations have shown the differences existing between the specific gravities of the gray and white matter of the cerebrum; for, how is it possible to ensure precisely the same relative proportions between these two substances in all the portions of brain taken for examination? And even were it possible to do this, the result would still be a crude one, capable only of being compared with others of the same kind, and revealing nothing with regard to the separate specific gravities of gray and white matter respectively—each of which, as is now known, may vary independently of the other, and so exert more than a fair share of influence upon the number obtained. A high specific gravity of gray matter might even be masked by a slight softening of the white substance—a combination occasionally met with amongst the insane, and which, when it occurs, would, by this method, yield a mean number in every way deceptive.

About the same time that Dr. Bucknill published his second table, Dr. Aitken's attention was attracted to the subject of the specific gravity of the brain by some observations which he made on the central ganglia in a case of chorea.\* He found the combined corpus striatum and optic thalamus on the right side to have a specific gravity of 1·025, and on the left 1·031. This induced him to make other observations upon the brains of persons dying in the Royal Infirmary of Glasgow, in order to compare the specific weights of the central ganglia on the two sides of the body with one another, and with that of the cerebrum and the cerebellum. The results of the examination of eight cases, including the one of chorea, are given in the paper above referred to. His method of estimating the specific gravities seems to be the same as that adopted by Dr. Bucknill, and the same objections apply to the results as far as the cerebrum is concerned, and also with minor force to the estimation of the specific weight of the corpus striatum and optic

\* 'Glasgow Medical Journal,' No. 1., 1853.

thalamus taken together. But the recognition of a difference in the specific gravity of such important parts as the central ganglia on the two sides of the brain, was in itself a most interesting fact, and an important one also, since besides calling attention to the specific gravity of these central parts, it led Dr. Aitken to initiate the practice of comparing the specific gravities of parts on the two sides of the brain.\* As will be seen hereafter, the specific weights of the central ganglia in this case were unusually low, whilst in two other cases he found their numbers considerably higher than what I should imagine to be the probable average of the two bodies thus taken together. Both Dr. Bucknill and Dr. Aitken found the specific gravity of the cerebellum higher than that of the cerebrum, and subsequent observations have tended to confirm this result.

We are indebted to Dr. Sankey for a valuable and elaborate paper upon the specific gravity of the brain, containing the results of an examination of this organ in upwards of seventy individuals who died in the London Fever Hospital. His observations were limited to the gray matter of the convolutions, and the white substance of the cerebrum, and, unfortunately, did not extend to the central ganglia. Inasmuch as the gray and white matter were examined separately, his method was free from the objections formerly stated, and his inquiries have furnished us with some valuable data concerning the specific gravity of these parts in sane individuals dying from ordinary diseases.† He introduced also a very convenient method of taking the specific gravities which, with some slight modifications, has been followed both by Dr. Skae and myself. Dr. Sankey's observations led him to place the mean specific gravity of the gray matter of the convolutions at 1·0346, the extremes met with being 1·028 and 1·046; whilst he ascertained the mean of the white substance to be 1·0412, with extremes of 1·032 and 1·048.

Dr. Skae, the next worker in this field, as a result of the examination of the brain in sixty-two persons dying in the Royal Edinburgh Asylum, published a valuable paper,§ "On the Weight and Specific Gravity of the Brain in the Insane," and, for the purposes of comparison, tabulated the results of his inquiry into the specific gravity of the gray and white matter of the cerebrum, in parallel columns with those of Dr. Sankey. He says: "A glance

\* It was at the strong recommendation of Professor Aitken that I was induced to take up the question of the specific gravity of the brain in the insane, as a method of investigation which promised to yield some definite, and valuable results.

† 'Brit. and For. Med.-Chir. Review,' January, 1853, p. 240.

‡ It must not be forgotten, however, that the majority of his cases also suffered from fever, as this seems to have a marked influence upon the specific gravity of the brain.

§ 'Edin. Month. Jour. of Med. Sc.,' Oct. 1854, p. 289.

at the tables will at once show that the specific gravity in the cases of insanity was almost uniformly higher, and this observation applies to both the gray and the white matter." He gives the mean specific gravity of the gray matter as 1·0391, the lowest density met with being 1·030, and the highest, 1·049; and the mean of the white as 1·0424, with extremes varying between 1·034 and 1·053. Dr. Skae also examined the cerebellum of twenty-seven insane patients, as well as in a few sane individuals, and after comparing the results, he says: "From these data, although limited, I infer that the specific gravity of the cerebellum is increased in insanity, and attains a greater increase in relation to that of the cerebrum than it does in persons dying sane."

In an article on "The Pathology of Insanity,"\* Dr. Bucknill has given a very interesting table compiled from the results of post-mortem examinations in sixty-three cases of insanity, and including more recent observations upon the specific gravity of the brain. These latter results are the more valuable because in the case of the cerebrum, he has now given us the benefit of his observations upon the specific gravity of the gray and white matter taken separately. He found the specific gravity of the gray matter in the insane to vary between 1·030 and 1·048, and the average to be 1·037, whilst that of the white substance varied between 1·033 and 1·046, and had a mean of 1·039. Dr. Bucknill also gives the average specific gravity of the cerebellum in this series as 1·040, the extremes being 1·030 and 1·049; he does not state, however, whether these results were from the examination of the whole organ, or of parts only, as in his previous experiments.

Dr. Peacock has published more recently† a limited number of observations upon the specific gravity of the encephalon, cerebrum, and cerebellum, and of the combined pons and medulla. The difference now ascertained to exist between the specific gravities of the pons and of the medulla oblongata when taken separately, render an examination of their combined specific gravity undesirable for the future. The method employed by Dr. Peacock was different from that adopted by previous observers; he resorted to the process of weighing in air and then in distilled water, and deducing the specific gravity of the body from its observed loss of weight in water, by a proportional formula. Of course, with a delicate balance and due precautions, this method would be as capable of yielding accurate results as the other, but it must not be forgotten that during the process of weighing in water, there would be the same difficulties to contend with as Dr. Bucknill speaks of in his attempts to ascertain the specific gravity of the cerebrum as a whole,

\* January, 1855, p. 207, 'Brit. and For. Med.-Chir. Review.'

† 'Trans. of Patholog. Soc.,' vol. XII (1860-61), p. 27.

viz., the freeing of so large a mass from air bubbles. Dr. Bucknill always found the specific gravity of the cerebrum as a whole less than that of its parts; and unless special precautions were taken, this may probably have been due, in part, to the entrance and lodgment of air in the ventricles. Both Dr. Bucknill and Dr. Peacock are silent upon the point as to whether, before attempting to estimate the specific gravity of the cerebrum, they were careful to strip off the pia mater and arachnoid. It seems right that this should always be done, not only as a matter of accuracy, but because the neglect to do so would so greatly increase the risk of vitiated results from the presence of air in the larger vessels, and from the increased liability to the entanglement of air bubbles by the membranes themselves. The mean specific gravity of the entire encephalon of twelve persons dying from other than cerebral diseases, Dr. Peacock found to be 1.036, of the cerebrum 1.0349, and of the cerebellum 1.040.

If we arrange the principal results hitherto arrived at by these various observers, upon the specific gravity of the brain and its parts, in a tabular form, as on next page, we shall be the better able to compare them, and such a table will be useful hereafter for reference.

## PARTS OF CEREBELLUM.

## PARTS OF CEREBRUM.

| Name of Observer. | ENCEPHALON.                 | TOTAL CEREBRUM.              |                     |                            |                         | TOTAL CEREBELLUM.          |                     |                           |                     |
|-------------------|-----------------------------|------------------------------|---------------------|----------------------------|-------------------------|----------------------------|---------------------|---------------------------|---------------------|
|                   |                             | Sane.                        | Insane.             | Gray matter.               | White matter.           | Sane.                      | Insane.             | Gray matter.              | White matter.       |
| Dr. Bucknill*     | ...                         | { 1.036<br>1.041<br>1.052    | { ...<br>...<br>... | { Sane.<br>...<br>...      | { Insane.<br>...<br>... | { ...<br>...<br>...        | { ...<br>...<br>... | { 1.037<br>1.042<br>1.053 | { ...<br>...<br>... |
| Dr. Aitken†       | ...                         | { 1.040<br>1.046             | { ...<br>...        | { ...<br>...<br>...        | { ...<br>...<br>...     | { ...<br>...<br>...        | { ...<br>...<br>... | { 1.039<br>1.043<br>1.046 | { ...<br>...<br>... |
| Dr. Sankey‡       | ...                         | { 1.033<br>1.037<br>1.046    | { ...<br>...<br>... | { ...<br>...<br>...        | { ...<br>...<br>...     | { ...<br>...<br>...        | { ...<br>...<br>... | { 1.038<br>1.043<br>1.049 | { ...<br>...<br>... |
| Dr. Skae§         | ....                        | ...                          | ...                 | { 1.028<br>1.0346<br>1.046 | { ...<br>...<br>...     | { 1.025<br>1.040<br>1.047  | { ...<br>...<br>... | { 1.042<br>1.044          | { ...<br>...<br>... |
| Dr. Peacock       | { 1.0321<br>1.036<br>1.0392 | { 1.0326<br>1.0349<br>1.0368 | { ...<br>...<br>... | { 1.030<br>1.0391<br>1.049 | { ...<br>...<br>...     | { 1.034<br>1.0424<br>1.053 | { ...<br>...<br>... | { 1.036<br>1.044          | { ...<br>...<br>... |

\* The numbers in the upper row were derived from the examination of 32 cases; those of the second from 30, and those of the third from an examination of 63 cases. The first two sets of numbers do not strictly represent the specific gravity of the "total cerebrum," but of "large pieces of brain containing a fair proportion of vesticular and tubular substance."

† The figures relating to the cerebrum were derived from an examination of 6 cases, and those to the cerebellum from 5 cases.

‡ Results from an examination of 73 cases.

§ Numbers relating to cerebrum from an examination of 62 cases, those to cerebellum in the insane from 27, and in the sane from 5.

|| Numbers derived from an examination of 12 cases, the persons being entirely free from cerebral disease.

The method of ascertaining the specific gravities, introduced by Dr. Sankey, to which I have before alluded, is this:—a number of tall glasses are taken, each of which is filled (beginning with the lowest), with a saline solution of gradually increasing density. In practice, it seems sufficient to adjust the density of the solutions, in the successive glasses, to alternate numbers only of the ordinary hydrometer scale; and, supposing the even numbers be taken, a series from 1·024—1·054 inclusive, making a total of sixteen glasses, would, with rare exceptions, be found sufficient for any investigation into the specific gravity of different parts of the human brain. The solutions being once prepared of the requisite density, the surest way of maintaining them in this condition, or rather of guarding against unknown alterations in strength, is to place in each glass two of the specific gravity beads which were formerly employed by barometer makers. Thus, if we have, for instance, three glasses containing solutions of the respective densities of 1·032, 1·034, and 1·036, we must put into each glass beads whose specific gravities are marked at one degree higher and one degree lower than the contained fluid; so that the glass whose fluid is marked at the specific gravity of 1·034, should contain beads marked 1·035 and 1·033, the former of which would sink to the bottom of the glass and the latter would float,\* whilst in the 1·036 solution, another 1·035 bead would float, and one marked 1·037 should touch the bottom of the glass. Any alteration in the density of the solution would be at once revealed by a change in the position of the beads—increased density from evaporation would be detected by a proportionate rise in the position of the lower bead, whilst a diminution in density from any cause would be shown by a sinking of the upper one. The solutions so prepared and ranged in order, the method of proceeding is sufficiently simple. If, for instance, we have a small portion of gray matter from one of the convolutions, just removed and on the point of the knife, all that we have to do is to hold it about two or three inches above one of the solutions—say, 1·032—and then push it off the blade by means of a probe or any other convenient instrument. After the first down-rush into the fluid, due to the momentum, has expended itself, we can see almost immediately whether the portion of brain substance continues to sink, rises, or has a tendency to remain stationary at any level to which it has fallen. If the latter were the case, the specific gravity of the portion of gray matter in the instance chosen would be 1·032, but if instead of floating indifferently in any stratum of this solution it sank to the bottom,

\* In Dr. Sankey's original description he has stated it the reverse way, thus, he says that in a solution of the density of 1·050 the 1·051 bead would float, and that marked 1·049 would sink. This, of course, was an oversight; but as he made a statement of this kind twice, it seems desirable, for the sake of clearness, to notice it.

whilst a similar piece taken in the same manner—or even the original portion rapidly removed by means of a forceps—floated in the solution just above marked 1·034, we may pretty safely conclude that the specific gravity of the gray matter is 1·033, or just intermediate between the densities of the two fluids in which it behaves so differently. The principal liability to error to be guarded against in this operation is the adhesion of minute air bubbles to the portion of brain, and to obviate this risk as far as possible, no number should be recorded unless the same result has been obtained in three or four successive trials.\* The salt originally used for the preparation of the solutions by Dr. Sankey was chloride of sodium, but he has since come to the conclusion that a solution of sugar, or better still, of sulphate of magnesia, is preferable owing to its slower and less decided action upon the portions of brain substance immersed in it. Whichever solution is used, and more especially with that of chloride of sodium, it is necessary to be guided only by the behaviour of the portion of the brain when first immersed in the fluid, since, as pointed out by Dr. Sankey, portions of brain will, after remaining in the solutions for a short time, sink in those in which they at first floated. With a view to uniformity in the conditions, Dr. Skae followed Dr. Sankey's example, and employed solutions of common salt, though he did not make use of the specific gravity beads. Speaking of his solutions he says, “to insure accuracy and avoid fallacies arising from the spontaneous evaporation of the fluid, their specific gravity was in every experiment tested afresh by the urinometer at the time of the observation.” In my own observations, I have employed solutions of sulphate of magnesia containing specific gravity beads.†

If solutions made at the time, as in Dr. Bucknill's experiments, are employed, a most necessary caution is to see that a thorough

\* To do away, as much as possible, with this source of error from air bubbles, it is also desirable that the solutions to be employed should be made at least several hours before they are used, to give time for the disappearance of the minute bubbles necessarily produced by the mixture and stirring of the fluids. Occasionally, soon after the due adjustment of the solutions, some of the lower beads may be found floating at the surface, being buoyed up by the accumulation and contact of some of these minute air bubbles. A few slight knocks with a glass rod will at once dislodge them, and allow the bead again to take up its proper position at the bottom of the glass.

† There is a possible error to be guarded against of a most important kind, and that is the employment of inaccurate instruments; I have tested my beads by comparing results obtained with them, and with a carefully made hydrometer having a long open scale, and have always found them tally with one another. The ordinary cheap urinometers are sometimes most untrustworthy. One which I purchased for half-a-crown I found to be just seven degrees wrong; and Dr. Beale speaks as follows concerning them:—“As sold, these instruments are often nearly useless, in consequence of the carelessness displayed in their manufacture. Out of twenty instruments, I have found several differing as much as ten degrees from each other.”

intermixture of the fluids has taken place, the adjustment of the density by merely "adding water or a strong solution of the salt until the cerebral mass hangs suspended in the fluid, without any tendency to float or sink," is by no means sufficient unless the addition is supplemented each time by a vigorous stirring. I have found, by experiment, that when a concentrated saline solution is added to water or a weaker solution, by simply pouring the one into the other, a very rough kind of admixture only takes place, and that a solution of homogeneous density is not produced by the tendency to diffusion alone, till after the expiration of a much longer period than might have been imagined. The heavier solution gravitates to the bottom of the glass, and a partial intermixture only takes place, so that we get a fluid the ascending strata of which are progressively less in density. In a solution of sulphate of magnesia thus prepared, I immediately placed three specific gravity beads, numbered 1·025, 1·027, and 1·029, and almost at once, as soon as the movements in the fluid had subsided, the beads took up positions at very slightly different levels, at about three inches from the bottom of the glass, the fluid itself having only a total height of four inches. These relative positions they maintained, with no appreciable variation; and after one hour had expired, I carefully removed with a pipette the upper strata of fluid for a depth of about three quarters of an inch, and found, after brisk stirring, this portion of the solution to have a specific gravity of 1·020; whilst the lowest strata, for the same depth, removed and treated in a similar manner, had a specific gravity of 1·051. On again pouring into one glass the three portions of the original solution and thoroughly mixing them, all three beads immediately rose to the surface, and the now homogeneous fluid had a specific gravity, as ascertained by the hydrometer, of 1·034. In another solution, prepared in the same manner, now before me, the three beads have maintained almost similar positions, with very slight change, for more than forty-eight hours. These results were somewhat startling, as one might have thought that the laws of diffusion would have come into more active operation. It shows, at all events, how necessary it is to guard against possible errors creeping into observations, from imperfect admixture of solutions of different density. Of course, I by no means mean to imply that preceding observers have not been fully aware of these facts; only it seems right to call attention to them, since inattention to their indications might become a source of error in the future.

Before I had proceeded very far with my own observations, I discovered a difference in the specific gravity of the gray matter taken from different convolutions; and this I have since found to be almost invariably the case, and pretty constant in kind. The amount of time at my disposal compelled me to put a limit to

these investigations, so that I have confined myself to an examination of the *gray matter* from three situations on each side of the cerebrum:—(a) from the ‘upper frontal’ convolution; (b) from the upper part of the ‘anterior ascending parietal’ convolution; and (c) from the ‘upper occipital’ convolution.\* In all cases, after removing the membranes from these parts, small pieces of the gray matter were sliced off with a sharp knife, the lowest strata not being included, in order to avoid, as far as possible, all chance of an accidental admixture of white matter. The portions taken from the occipital convolutions were removed with extra care, on account of the smaller depth of gray matter on the convolutions in this region. The *white matter* taken for examination was removed from near the centre of each hemisphere. In examining the *fornix*, portions of its body were selected. To ascertain the specific gravity of the *corpora striata*, I was at first in the habit of taking portions (after making a transverse section) from (a) the intra-ventricular portions of gray matter only, cutting a small piece out from the face of the section adjoining the ventricular surface; but latterly, after discovering the marked difference in the density of these parts, I have also taken cuttings (as free as possible from white fibres) from (b) the extra-ventricular portions (*nuclei lenticulares*) of these bodies. In determining the density of the *optic thalami* and the *pons varolii*, portions have been taken from near their centres. At first I was in the habit of ascertaining the specific gravity of the gray matter only of the *cerebellum*, by taking portions of about  $\frac{1}{5}$ " in thickness from near the middle of each side of its under surface, after having stripped off its membranes and made sections through it in these situations;† but latterly, I have also estimated the specific weight of the central white matter of the cerebellum. In examining the *medulla oblongata*, I have first, whilst it was still in connection with the pons, carefully stripped the membranes from it, and then, after severing it from this body and also cutting away any part of the cord, by means of a section level with the lower extremi-

\* For the names of the various convolutions, see Gratiolet’s work, ‘Sur les Plis Cérébraux de l’Homme;’ or else an admirable memoir by Professor Marshall (‘Philos. Transact.’ 1864, p. 501), “On the Brain of a Bushwoman; and on the Brains of two Idiots of European Descent.”

† The results so obtained are not quite as perfect as could be desired, since it is impossible to take such portions from the cerebellum without including along with the gray matter some small ramifications of the white substance. The sections were made in the situations indicated, because in these regions it was found that fragments agreeing as nearly as possible with one another could be most easily taken for examination—that is to say, fragments always containing about the same relative amount of admixed white substance. The fact, however (as will be hereafter seen), that in so many cases the white matter of the cerebellum has the same specific gravity as these other superficial portions, consisting mostly of gray matter, makes this slight admixture of far less consequence than it would be if, as in the cerebrum, the gray and white matter differed considerably in their respective specific weights.

ties of the anterior pyramids, have estimated its specific gravity as a whole.

Unfortunately, the examination of ten of the brains of the eleven insane persons has not been so complete as that to which the eleventh and most of the other twenty-nine cases have been subjected. These were my first observations on the subject, and as I gradually discovered the very considerable variations in the specific gravities of the different parts of the brain in different individuals, and especially the variations in that of the gray matter in the same brain, I became anxious to examine this organ in a certain number of sane individuals after the same method, so as to ascertain, if possible, what amount of importance could be attached to these deviations, and whether or not they would seem to have any connection with the mental condition of the individual.

As the specific gravities have been taken of so many parts of the brain in each case, and the variations in the different cases are so dissimilar, the only satisfactory way of recording these observations seems to be to give each series of numbers separately, in order that they may be readily compared with one another, and the method of their variation, if possible, detected. This I have therefore done, giving, in addition, particulars as to sex, age, interval between death and autopsy, as well as nature of illness and principal pathological conditions met with after death. Where the brain was notably congested or anaemic, I have mentioned the fact, and in the remaining cases a medium condition of vascularity may be considered to have existed. The cases have been numbered also for facility of reference, and in each table have been ranged in order of age.

Of the twenty-nine cases in which the brains of sane persons were submitted to examination, and the results given in the following tables, twenty-five only will be taken account of hereafter for the purpose of estimating averages. The four cases omitted are numbered I, II, XXI, and XXVII. The two former were not included, on account of the brains having been taken from children only two years of age, and the two latter because the evidence as to the mental condition of the individuals was not of a sufficiently decided nature.

The examination of the brain in Nos. XXI and XXVII amongst the sane, and in all the insane cases with the exception of No. XXXI, were made in this country at varying periods of the year, and therefore at periods of different atmospheric temperature; but in all the remaining cases the investigations were carried on this summer at Berlin,\*

\* This portion of the work was done in the Pathological Institute of Berlin, where, through the kindness and courtesy of Professor Virchow and his two assistants, Drs. Klebs and Colnheim, every facility was afforded me for carrying on these investigations, and I now most gratefully acknowledge my obligations to them. As the brains occasionally remained on the wooden trays for about half

the temperature of the room, during the fortnight that I was working there, varying only from about  $71^{\circ}$  to  $77^{\circ}$  Fahr., whilst that of the solutions was about three or four degrees lower than that of the air.

The slight increase in the temperature of the solutions in these later experiments above that of  $60^{\circ}$  Fahr., at which all observations upon specific gravity should be conducted, when taken in conjunction, too, with the part compensation afforded by the simultaneous action of the increased temperature upon the bulk of the beads themselves, could produce only a very infinitesimal amount of vitiation in the correctness of the results. And, indeed, seeing that water in its passage through a range of temperature from  $32^{\circ}$  to  $212^{\circ}$  Fahr., apparently increases in bulk only by about  $\frac{1}{22}$  of its original volume, it does not seem likely, either, that any degree to which the temperature of the solution would fall would exercise a very appreciable influence upon the correctness of the observations.\* It must be borne in mind that the maximum fall which could have any effect

an hour after the ordinary pathological examination, before I could proceed to estimate their specific gravities, and these trays were sometimes wet, I made a few experiments to ascertain what amount of influence, if any, such a length of exposure to air, or contact with a wet tray, would exercise upon the specific gravity of the white and gray matter of the brain, and found that within this period these conditions appeared to exercise no appreciable influence whatever. Thus, white matter, after lying (even completely) in water for a period of thirty minutes, was found to have the same specific gravity as before immersion; and no change, either, was found in the specific gravity of the gray matter of the convolutions, after allowing portions of the brain, covered by the arachnoid, to remain for a similar period with this surface downwards, in contact with a thin stratum of fluid upon a wet tray—the portions of gray matter examined before and after being taken from what were nearly adjacent portions of the same convolutions. And with regard to the influence of the high summer temperature, no increase of density could be detected after such short periods of exposure, provided the convolutions were still covered by the arachnoid, whilst as far as the white matter was concerned it was always easy to take portions from beneath a surface which had been at all exposed. Alterations from atmospheric influence were also guarded against, as much as possible, by throwing a towel over the brain during these occasional intervals.

\* Whilst this paper has been going through the press, I have made some experiments in order to ascertain what amount of error can result from inattention to the temperature of solutions, and have been much pleased to find this so very insignificant when sp. gr. beads are employed, as to render attention to this point of little importance. Thus the compensating variation in the beads is such, that I have found, after adjusting a solution of sulphate of magnesia at a temperature of  $60^{\circ}$  Fahr., to a specific gravity of 1.028, the solution could be raised to a temperature of  $84^{\circ}$  Fahr. before the 1.027 bead sank midway in the solution; whilst, on the other hand, when the solution was cooled to  $40^{\circ}$  Fahr., the deviation was still less, since the 1.029 bead still remained at the bottom of the bottle. During these experiments a thermometer was kept in the solution, and due precautions were taken to prevent alteration in the density of the solution from evaporation. If the solutions, instead of being prepared at the temperature of  $60^{\circ}$  Fahr., have been adjusted to the beads at a time when the temperature of the weather is above or below this point, a little reflection will show that this of itself tends to diminish the small amount of possible error before alluded to, and so makes attention to temperature even of less importance.

of this kind would only be to the extent of  $20^{\circ}$  Fahr., since it has been proved that saline solutions exhibit the same changes in bulk in passing from a temperature of  $40^{\circ}$  Fahr. to  $32^{\circ}$  Fahr. as are so well known to take place with pure water. The progressively increasing re-expansions of the solutions at temperatures below that at which water attains its maximum density would, therefore, have a corresponding tendency to assimilate the density of the solutions to that which would exist at the prescribed temperature of  $60^{\circ}$  Fahr.

I have been thus precise in describing my method of proceeding, not only for the information of any others who may wish to follow up this investigation in such a way that their observations could be compared with mine, but because it is only fair that the exact conditions of the experiments should be made known, in order that others may form an opinion as to the trustworthiness of the results.

## SPECIFIC GRAVITY OF DIFFERENT PARTS OF THE BRAIN OF SANE INDIVIDUALS.

| No. of Case. | Age. | Sex. | No. of Hours between Death and Autopsy. | Nature of Illness and Pathological States met with after Death.       | Gray Matter.   | White Matter.                                      | Fornix.  | Corpora Striata.                                | Opt. Thalam. Cerebellum.                  | Pons.                            | Medulla. |
|--------------|------|------|---|---|--|--|--|---|---|----------------------------------|----------|
| I.           | 2    | F.   | 20                                      | Measles followed by broncho-pneumonia.<br><i>Congestion of brain.</i> | R.<br>a. 1.027<br>b. 1.027<br>c. 1.035<br>L.                                     | R.<br>1.029<br>L.<br>1.035<br>b. 1.029<br>c. 1.033 | a. 1.033<br>b. 1.037<br>L.<br>a. 1.033<br>b. 1.037 | R.<br>1.039<br>L.<br>L.<br>a. 1.033<br>b. 1.039 | R.<br>1.035<br>L.<br>1.035<br>W.<br>1.036 |                                  |          |
| II.          | 2    | F.   | 36                                      | Scarlet fever.<br>No notable pathological change recognised.          | R.<br>a. 1.029<br>b. 1.029<br>c. 1.033<br>L.<br>a. 1.029<br>b. 1.031<br>c. 1.033 | R.<br>1.035<br>L.<br>1.035<br>b. 1.029             | a. 1.035<br>b. 1.037<br>L.<br>a. 1.035<br>b. 1.037 | R.<br>1.039<br>L.<br>L.<br>a. 1.035<br>b. 1.039 | R.<br>1.038<br>L.<br>1.038<br>W.<br>1.038 | 1.041<br>1.033<br>1.043<br>1.033 |          |

| No. of Case. | Age. | Sex. | No. of Hours between Death and Autopsy. | Nature of Illness and Pathological States met with after Death.   | Gray Matter.                                       | White Matter.                       | Fornix.                       | Corpora Striata.                 | Opt. Thalam.               | Cerebellum.                | Pons. | Medulla. |
|--------------|------|------|---|---|--|-------------------------------------|-------------------------------|----------------------------------|----------------------------|----------------------------|-------|----------|
| III.         | 6    | M.   | 36                                      | Scarlet fever some months before death.<br>Body rather emaciated; slight capillary bronchitis of both lungs; liver fatty; mesenteric glands enlarged<br>Brain slightly congested; white matter in posterior part of hemispheres much softened, easily breaking up when water is poured upon it. | R.<br>1.039<br>Softer part<br>b. 1.026<br>c. 1.029 | R.<br>1.027<br>b. 1.026<br>c. 1.029 | R.<br>1.031<br>L.<br>L.       | a. 1.031<br>b. 1.041<br>c. 1.041 | R.<br>1.040<br>L.<br>L.    | R.<br>1.035<br>L.<br>1.035 | 1.043 | 1.035    |
| IV.          | 20   | M.   | 32                                      | <i>General anasarca</i> ; hypertrophy of heart, with mitral insufficiency and thickening of aortic valves; lungs very tough, firm, and dark coloured; nutmeg liver, very tough; kidney having cortical substance, narrow, with pale, fatty look.  | R.<br>1.029<br>a. 1.029<br>b. 1.029<br>c. 1.029    | R.<br>1.035<br>L.<br>L.             | R.<br>1.035<br>b. 1.039<br>L. | a. 1.035<br>b. 1.041<br>c. 1.031 | R.<br>1.043<br>L.<br>1.041 | R.<br>1.037<br>L.<br>1.037 | 1.041 | 1.035    |
| V.           | 20   | M.   | 24                                      | Death on fourth day, of scarlet fever.<br>Brain slightly congested; arachnoid natural.  | R.<br>a. 1.031<br>b. 1.033<br>c. 1.033             | R.<br>R.<br>L.                      | R.<br>1.039<br>L.             | a. 1.037<br>b. 1.041<br>c. 1.035 | R.<br>1.041<br>L.<br>1.041 | R.<br>1.039<br>L.<br>W.    | 1.041 | 1.036    |

|       |    |    |    |  |  |  |  |   |
|-------|----|----|----|--|--|--|--|---|
| VI.   | 24 | M. | 22 | Typhoid fever; death in third week.<br>Brain congested; membranes normal.  | R.<br>a. 1.027<br>b. 1.029<br>c. 1.031<br>L.<br>a. 1.027<br>b. 1.029<br>c. 1.031 | R.<br>a. 1.035<br>b. 1.041<br>L.<br>a. 1.035<br>b. 1.041             | R.<br>a. 1.039<br>L.<br>a. 1.043<br>L.<br>W.<br>1.039    | R.<br>1.039<br>L.<br>1.039<br>W.<br>1.039 |
| VII.  | 24 | M. | 17 | Traumatic peritonitis, following operation for<br>abscess in abdominal wall.   | R.<br>a. 1.027<br>b. 1.027<br>c. 1.029<br>L.<br>a. 1.027<br>b. 1.027<br>c. 1.029 | R.<br>a. 1.035<br>b. 1.041<br>L.<br>a. 1.035<br>b. 1.041             | R.<br>1.037<br>L.<br>1.037<br>W.<br>1.037                | R.<br>1.037<br>L.<br>1.037<br>W.<br>1.037 |
| VIII. | 24 | M. | 55 | Large chronic abscess in liver; peritonitis<br>and double pleurisy; membranes of brain<br>normal.  | R.<br>a. 1.030<br>b. 1.031<br>c. 1.033<br>L.<br>a. 1.033<br>b. 1.033<br>c. 1.035 | R.<br>a. 1.039<br>b. 1.033<br>L.<br>a. 1.039<br>b. 1.033<br>c. 1.035 | R.<br>a. 1.037<br>b. 1.041<br>L.<br>a. 1.035<br>b. 1.041 | R.<br>1.039<br>L.<br>1.039<br>W.<br>1.040 |
| IX.   | 25 | F. | 17 | Necrosis of petrous portion of temporal bone<br>(right), near and below mastoid cells; gan-<br>grene of dura mater over necrosed bone, b.<br>and also two superficial patches of gangrene<br>on corresponding portions of right half of<br>cerebellum, about $\frac{1}{3}$ " in diameter.<br>Brain congested; thrombosis in right lateral<br>and petrosal sinuses, and also of internal<br>jugular on same side.<br>Disease of two or three years' duration; no<br>delirium during life, but semi-comatose con-<br>dition during last two hours of life. | R.<br>a. 1.035<br>b. 1.043<br>L.<br>a. 1.035<br>b. 1.043                         | R.<br>a. 1.035<br>b. 1.043<br>L.<br>a. 1.035<br>b. 1.043             | R.<br>1.043<br>L.<br>1.043<br>L.<br>1.043                | R.<br>1.043<br>L.<br>1.043<br>L.<br>1.043 |

| No. of Case. | Age. | Sex. | No. of Hours between Death and Autopsy. | Nature of Illness and Pathological States met with after Death.   | Gray Matter.                                 | White Matter.                    | Fornix.                                | Corpora Striata.                 | Opt. Thalam.                     | Cerebellum.                      | Pons.                            | Medulla.                         |
|--------------|------|------|---|---|--|----------------------------------|--|----------------------------------|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| X.           | 28   | M.   | 32                                      | Disease of left knee-joint, with large suppurating cavities in muscles above and below; early stage of inflammation of lungs; septicæmia with secondary fever; delirium before death.<br><i>Brain congested</i> ; great thickening and opacity of arachnoid on upper surface, especially on either side of middle line. | R.<br>a. 1.029<br>b. 1.029<br>c. 1.031       | R.<br>a. 1.029<br>b. 1.041<br>L. | R.<br>a. 1.035<br>b. 1.043<br>L.       | R.<br>a. 1.033<br>b. 1.041<br>L. | R.<br>a. 1.043<br>b. 1.041<br>L. | R.<br>a. 1.041<br>b. 1.041<br>W. | R.<br>a. 1.043<br>b. 1.041<br>W. | R.<br>a. 1.043<br>b. 1.041<br>W. |
| XI.          | 29   | M.   | 35                                      | Necrosis of rib, with empyema and peritonitis; increase of sub-arachnoid fluid, with slight thickening of membrane.   | R.<br>a. 1.027<br>b. 1.029<br>c. 1.031<br>L. | R.<br>a. 1.029<br>b. 1.039<br>L. | R.<br>a. 1.029<br>b. 1.039<br>c. 1.031 | R.<br>a. 1.035<br>b. 1.041<br>L. | R.<br>a. 1.029<br>b. 1.035<br>L. | R.<br>a. 1.043<br>b. 1.041<br>W. | R.<br>a. 1.037<br>b. 1.037<br>W. | R.<br>a. 1.043<br>b. 1.043<br>W. |
| XII.         | 31   | F.   | 21                                      | Post-puerperal inflammation of left knee-joint, with abscesses in muscles around; endocarditis; slight inflammation of liver; kidneys slightly granular; <i>brain anaemic</i> ; Death in seventh week after parturition.  | R.<br>a. 1.030<br>b. 1.031<br>c. 1.037<br>L. | R.<br>a. 1.041<br>b. 1.041<br>L. | R.<br>a. 1.035<br>b. 1.041<br>L.       | R.<br>a. 1.037<br>b. 1.041<br>L. | R.<br>a. 1.037<br>b. 1.041<br>L. | R.<br>a. 1.041<br>b. 1.041<br>W. | R.<br>a. 1.041<br>b. 1.041<br>W. | R.<br>a. 1.043<br>b. 1.043<br>W. |

|       |    |    |    |  |  |  |  |
|-------|----|----|----|--|--|--|--|
| XIII. | 34 | F. | 11 | Sarcomatous tumour of right ovary, about seven inches in diameter; spleen large, soft; liver large; swelling of glands behind tongue; enteritis follicularis.<br>Death sudden; fever and heat of skin during last day of life only.  | R.<br>a. 1.027<br>b. 1.031<br>c. 1.035<br>L.<br>a. 1.027<br>b. 1.029<br>c. 1.037 | R.<br>a. 1.035<br>b. 1.039<br>L.<br>a. 1.035<br>b. 1.039 | R.<br>a. 1.039<br>b. 1.039<br>W.<br>a. 1.039<br>b. 1.037 |
| XIV.  | 36 | M. | 12 | Phthisis.<br>Membranes and brain substance normal in appearance; convolutions extremely well developed, small, but very numerous and closely packed; ascending parietal convolutions very complex.   | R.<br>a. 1.029<br>b. 1.029<br>c. 1.031<br>L.<br>a. 1.029<br>b. 1.029<br>c. 1.031 | R.<br>a. 1.035<br>b. 1.041<br>L.<br>a. 1.035<br>b. 1.041 | R.<br>a. 1.043<br>b. 1.041<br>L.<br>a. 1.043<br>b. 1.041 |
| XV.   | 40 | M. | 20 | A drunkard; delirium tremens and pleuro-pneumonia.<br>Thickening of calvaria; dura mater very adherent to base of skull; great thickening and vascularity of occipital bone at and on each side of the internal occipital protuberance; thickening and opacity of arachnoid; <i>great congestion of brain.</i> | R.<br>a. 1.029<br>b. 1.029<br>c. 1.031<br>L.<br>a. 1.031<br>b. 1.030<br>c. 1.035 | R.<br>a. 1.041<br>b. 1.043<br>L.<br>a. 1.041<br>b. 1.043 | R.<br>a. 1.045<br>b. 1.041<br>L.<br>a. 1.045<br>b. 1.041 |
| XVI.  | 40 | M. | 14 | Epilepsy; temporary paralysis of left side for one day shortly before death; skull-cap thick, diploë full of blood; four deep, sharply defined depressions for Pachianian glands; great congestion of internal organs; heart healthy.<br><i>Brain considerably congested.</i>                                  | R.<br>a. 1.031<br>b. 1.031<br>c. 1.031   | R.<br>a. 1.035<br>b. 1.043<br>L.<br>a. 1.035<br>b. 1.043 | R.<br>a. 1.043<br>b. 1.043<br>L.<br>a. 1.043<br>b. 1.043 |

| No. of Case. | Age. | Sex. | No. of Hours between Death and Autopsy. | Nature of Illness and Pathological States met with after Death.  | Gray Matter.                             | White Matter.     | Fornix.     | Corpora Striata.           | Opt. Thalam.                              | Cere. bellum.              | Pons. | Medulla. |
|--------------|------|------|---|--|--|-------------------|-------------|----------------------------|---|----------------------------|-------|----------|
| XVII.        | 40   | M.   | 24                                      | Abscess and ulceration of left parotid gland; typhoid fever three months before.   | R.<br>a. 1·029<br>b. 1·027<br>c. 1·029   | R.<br>1·040<br>L. | R.<br>1·037 | a. 1·032<br>L.<br>a. 1·031 | R.<br>1·042<br>L.<br>1·042<br>to<br>1·043 | R.<br>1·037<br>L.<br>1·037 | 1·043 | 1·035    |
| XVIII.       | 44   | M.   | 52                                      | Phthisis and tubercular ulceration of intestine. Thickening and opacity of arachnoid.  | R.<br>a. 1·025<br>b. 1·029<br>c. 1·031   | R.<br>1·040<br>L. | R.<br>1·030 | a. 1·033<br>L.<br>a. 1·033 | R.<br>1·042<br>L.<br>1·042<br>R.<br>1·039 | R.<br>1·042<br>L.<br>1·039 | 1·042 | 1·035    |
| XIX.         | 51   | M.   | 29                                      | Bronchitis and oedema pulmonum; kidneys large and congested. Diploë of calvaria very full of blood; <i>brain much congested.</i> | R.<br>a. 1·027<br>b. 1·029<br>c. 1·033-7 | R.<br>1·041<br>L. | R.<br>1·035 | a. 1·035<br>L.<br>a. 1·035 | R.<br>1·043<br>L.<br>1·043                | R.<br>1·041<br>L.<br>1·041 | 1·043 | 1·035    |



| No. of Case.               | Age. | Sex. | No. of Hours between Death and Autopsy. | Nature of Illness and Pathological States met with after Death.   | Gray Matter.                                    | White Matter.                    | Fornix. | Corpora Striata.                 | Opt. Thalamii.                   | Cerebellum.                      | Pons. | Medulla. |
|----------------------------|------|------|---|---|---|----------------------------------|---------|----------------------------------|----------------------------------|----------------------------------|-------|----------|
| XXIII.<br><i>continued</i> |      |      |   | Much fluid beneath arachnoid, with great thickening and opacity of the membrane; medium vascularity of brain; pulpy softening of some of occipital convolutions on left side, some more extensive on right; remains to of an old clot (tolerably firm, and of a dirty, reddish-brown colour) in white matter below, and slightly posterior to inner side of right optic thalamus; white matter much softened in neighbourhood, and also more slightly to 1.035 in anterior portions of same hemisphere. | R.<br>a. 1.033<br>b. 1.033<br>c. 1.026 to 1.029 | R.<br>a. 1.031<br>b. 1.034<br>L. | 1.032   | R.<br>a. 1.037<br>b. 1.043<br>L. | R.<br>a. 1.043<br>b. 1.041<br>W. | R.<br>a. 1.043<br>b. 1.043<br>L. | 1.045 | 1.038    |
| XXIV.                      | 64   | M.   | 27                                      | A drunkard; delirium tremens with bronchitis and right pleurisy; thickening and opacity of arachnoid.   | R.<br>a. 1.027<br>b. 1.029<br>c. 1.031          | R.<br>a. 1.041<br>b. 1.041<br>L. | 1.029   | R.<br>a. 1.035<br>b. 1.041<br>L. | R.<br>a. 1.043<br>b. 1.043<br>L. | 1.039                            | 1.041 | 1.036    |
| XXV.                       | 64   | M.   | 18                                      | Phthisis; resection of bones of left tarsus; gradually sank after operation.  | R.<br>a. 1.027<br>b. 1.027<br>c. 1.031          | R.<br>a. 1.039<br>b. 1.039<br>L. | 1.025   | R.<br>a. 1.031<br>b. 1.041<br>L. | R.<br>a. 1.043<br>b. 1.043<br>L. | 1.035                            | 1.035 | 1.035    |

|         |    |    |    |  |  |   |  |  |  |
|---------|----|----|----|--|--|---|--|--|--|
| XXVI.   | €5 | M. | 24 | Right facial paralysis and right hemiplegia of four days' duration.<br>Great opacity of arachnoid, with considerable increase of sub-arachnoid fluid.<br>No naked eye appearances accounting for hemiplegia.   | R.<br><br><i>a.</i> 1·025<br><i>b.</i> 1·029<br><i>c.</i> 1·030<br><br><i>a.</i> 1·027<br><i>b.</i> 1·029<br><i>c.</i> 1·029 | R.<br><br><i>a.</i> 1·038<br><i>b.</i> 1·039 to L.<br><i>c.</i> 1·035 | R.<br><br><i>a.</i> 1·035<br><i>b.</i> 1·041 L.<br><i>c.</i> 1·035 | R.<br><br><i>a.</i> 1·039 to L.<br><i>b.</i> 1·041 L.<br><i>c.</i> 1·039 | R.<br><br><i>a.</i> 1·035<br><i>b.</i> 1·041 L.<br><i>c.</i> 1·035 |
| XXVII.  | 68 | M. | 24 | Chronic bronchitis; hypertrophy and dilatation of heart, with considerable disease of aortic valves.<br>Anasarca of lower half of body.<br>Skull-cap thin; dura very adherent anteriorly; thickening and opacity of arachnoid, with slight increase of fluid beneath.  | R.<br><br><i>a.</i> 1·029<br><i>b.</i> 1·037<br><i>c.</i> 1·029  | R.<br><br><i>a.</i> 1·029<br><i>b.</i> 1·037<br><i>c.</i> 1·029       | R.<br><br><i>a.</i> 1·029<br><i>b.</i> 1·029<br><i>c.</i> 1·029    | R.<br><br><i>a.</i> 1·029<br><i>b.</i> 1·041<br><i>c.</i> 1·041          | R.<br><br><i>a.</i> 1·029<br><i>b.</i> 1·041<br><i>c.</i> 1·041    |
| XXVIII. | 70 | M. | 30 | Cancer of oesophagus opening into bronchus.<br>Medium vascularity of brain.  | R.<br><br><i>a.</i> 1·029<br><i>b.</i> 1·029<br><i>c.</i> 1·034  | R.<br><br><i>a.</i> 1·042<br><i>b.</i> 1·042<br><i>c.</i> 1·042       | R.<br><br><i>a.</i> 1·033<br><i>b.</i> 1·043<br><i>c.</i> 1·043    | R.<br><br><i>a.</i> 1·033<br><i>b.</i> 1·043<br><i>c.</i> 1·043          | R.<br><br><i>a.</i> 1·037<br><i>b.</i> 1·043<br><i>c.</i> 1·041    |
| XXIX.   | 73 | M. | 24 | Anasarca of lower half of body; granular degeneration of kidneys; hypertrophy of left ventricle of heart, but no notable valvular disease; extreme congestion of lungs.<br>Carcinomatous ulceration of stomach (early stage).<br>Congestion of brain; thickening and opacity of arachnoid, with increase of sub-arachnoid fluid. | R.<br><br><i>a.</i> 1·029<br><i>b.</i> 1·027<br><i>c.</i> 1·027  | R.<br><br><i>a.</i> 1·039<br><i>b.</i> 1·039<br><i>c.</i> 1·034       | R.<br><br><i>a.</i> 1·029<br><i>b.</i> 1·041<br><i>c.</i> 1·043    | R.<br><br><i>a.</i> 1·031<br><i>b.</i> 1·041<br><i>c.</i> 1·043          | R.<br><br><i>a.</i> 1·040<br><i>b.</i> 1·040<br><i>c.</i> 1·040    |

## SPECIFIC GRAVITY OF DIFFERENT PARTS OF THE BRAIN OF INSANE INDIVIDUALS.

| No. of Case. | Age. | Sex. | No. of Hours between Death and Autopsy. | Nature of Illness and Pathological States met with after Death.   | Gray Matter.               | White Matter.                         | Fornix.                               | Corpora Striata.                                    | Opt. Thalami.                                      | Cerebellum.                      | Pons. | Medulla. |
|--------------|------|------|---|---|----------------------------|---------------------------------------|---------------------------------------|---|--|----------------------------------|-------|----------|
| XXX.         | 36   | M.   | 36                                      | Chronic mania, with delusions; phthisis; large cavity in right lung, and recent pleurisy on right side.<br>Slight opacity of arachnoid on either side of longitudinal sinus, with slight increase of fluid beneath.<br>Brain substance of medium vascularity, very firm and consistent.   | R.<br>L.<br>L.             | R.<br>1·042<br>1·042                  | —                                     | —   | R.<br>L.<br>L.                                     | R.<br>1·038<br>L.<br>1·038       | —     | —        |
| XXXI.        | 38   | F.   | 16                                      | Melancholia of three and a half months' duration; delusions and hallucinations; suicidal tendencies (several attempts). Suffocated herself by stuffing a large piece of linen into pharynx, where it was found after death covering top of larynx.<br><i>Congestion of brain</i> ; arachnoid normal; no increase of fluid beneath; three symmetrical patches of softening in each corpus striatum, the largest about $\frac{1}{3}$ " in diameter in <i>nucleus lenticularis</i> , two upper about size of peas, in <i>nuc. caudatus</i> on each side.<br>No trace of paralysis during life. | R.<br>a.<br>b.<br>c.<br>L. | R.<br>1·031-2<br>1·031<br>1·031<br>L. | —<br>R.<br>1·039<br>L.<br>1·039<br>L. | R.<br>a.<br>b.<br>c.<br>Deep<br>softened<br>portion | R.<br>1·039<br>L.<br>1·039<br>L.<br>1·039<br>1·031 | 1·041<br>1·039<br>1·039<br>1·039 | 1·038 |          |

|         |    |    |    |  |                            |  |                            |  |                            |   |                            |   |                            |
|---------|----|----|----|--|----------------------------|--|----------------------------|--|----------------------------|---|----------------------------|---|----------------------------|
| XXXII.  | 39 | F. | 50 | Chronic mania; weak minded, and rather incoherent; no constant or well-marked delusions.<br>Phthisis; tubercular ulceration of intestine; peritonitis; skull-cap thick; arachnoid normal; brain anaemic.   | R.<br>R.<br>R.<br>R.<br>R. | 1·030<br>1·041<br>1·029<br>1·041<br>1·031    | L.<br>L.<br>L.<br>L.<br>L. | a. 1·033<br>1·033<br>a. 1·033<br>1·041<br>1·042          | R.<br>R.<br>R.<br>R.<br>R. | 1·041<br>1·041<br>1·037<br>1·040<br>1·041 | L.<br>L.<br>L.<br>L.<br>L. | 1·039<br>1·039<br>1·039<br>1·039<br>1·043 | R.<br>R.<br>R.<br>R.<br>R. |
| XXXIII. | 44 | M. | 23 | Chronic mania; very incoherent; delusions numerous, but not constant; diarrhoea; anaemia; body much emaciated; great accumulation of foreign bodies in rectum. Arachnoid thickened and opaque over the whole of vertex, with increase of sub-arachnoid fluid.  | R.<br>R.<br>R.<br>R.<br>R. | 1·034<br>1·042<br>1·029<br>1·042<br>1·034    | L.<br>L.<br>L.<br>L.<br>L. | a. 1·037<br>1·037<br>a. 1·037<br>1·040<br>b. 1·034       | R.<br>R.<br>R.<br>R.<br>R. | 1·040<br>1·040<br>1·037<br>1·040<br>1·042 | L.<br>L.<br>L.<br>L.<br>L. | 1·039<br>1·039<br>1·039<br>1·045<br>—     | R.<br>R.<br>R.<br>R.<br>R. |
| XXXIV.  | 44 | M. | 30 | Epilepsy, with chronic mania; very excitable, and destructive at times of fits. Turned on face, and was suffocated during a fit.<br><i>Extreme congestion of brain and organs of body generally; slight opacity of arachnoid; no notable increase of sub-arachnoid fluid.</i>  | R.<br>R.<br>R.<br>R.<br>R. | 1·031<br>—<br>1·036<br>1·042<br>c. 1·036     | —<br>L.<br>L.<br>L.<br>L.  | a. 1·037<br>a. 1·037<br>a. 1·037<br>a. 1·037<br>b. —     | R.<br>R.<br>R.<br>R.<br>R. | 1·045<br>1·045<br>1·045<br>1·045<br>1·042 | L.<br>L.<br>L.<br>L.<br>L. | 1·044<br>1·044<br>1·044<br>1·045<br>—     | R.<br>R.<br>R.<br>R.<br>R. |
| XXXV.   | 49 | F. | 26 | Chronic mania; no well-marked delusions. Chronic pleurisy; ascites; pulmonary apoplexy (circumscribed). Skull-cap thickened; sutures obliterated; arachnoid slightly opaque anteriorly; considerable increase of sub-arachnoid fluid. Local atrophy of convolutions; sharp bony spicules in middle fossa of base of skull. | R.<br>R.<br>R.<br>R.<br>R. | 1·034<br>1·034<br>1·038<br>1·034<br>b. 1·034 | L.<br>L.<br>L.<br>L.<br>L. | a. 1·034<br>a. 1·034<br>a. 1·034<br>a. 1·034<br>b. 1·034 | R.<br>R.<br>R.<br>R.<br>R. | 1·041<br>1·041<br>1·041<br>1·041<br>1·038 | L.<br>L.<br>L.<br>L.<br>L. | 1·038<br>1·038<br>1·038<br>1·038<br>—     | R.<br>R.<br>R.<br>R.<br>R. |

| No. of Case. | Age. | Sex. | No. of Hours between Death and Autopsy. | Nature of Illness and Pathological States met with after Death.   | Gray Matter.  | White Matter.  | Fornix.   | Corpora Striata.   | Opt. Thalam.                        | Cerebellum.             | Pons. | Medulla. |
|--------------|------|------|---|---|---|--|---|--|-------------------------------------|-------------------------|-------|----------|
| XXXVI.       | 52   | M.   | 16                                      | Chronic mania, with delusions; amyloid disease of kidney; hypertrophy and dilatation of heart; slight disease of aortic valves; extreme anaemia; anasarca.<br>Dura very adherent; thickening and opacity of arachnoid; great increase of sub-arachnoid fluid; ventricles filled with fluid.<br><i>Brain extremely anaemic.</i>  | R.<br>a. 1.033<br>b. —<br>c. 1.035                            | R.<br>1.042<br>L.<br>a. 1.033<br>b. —<br>c. 1.035                    | a. 1.039<br>1.032<br>1.042  | R.<br>a. 1.043<br>L.<br>a. 1.043   | R.<br>1.041<br>L.<br>1.041          | —                       | —     |          |
| XXXVII.      | 57   | M.   | 16                                      | General paralysis, last stage; phthisis; gaseous cavities in both lungs; recent pleurisy; body extremely emaciated; thickening and opacity of arachnoid over vertex, and also in lateral regions; very great increase of sub-arachnoid fluid; membrane here and there rather adherent to convolutions, which were flattened and pressed together; diminished consistence of cerebral matter generally, and decided softening of white matter of nearly the whole of left hemisphere; slight atheroma of vessels at base; ventricles greatly distended with fluid.<br>During life frequent convulsive attacks; right side always principally affected. | R.<br>1.039<br>L.<br>Ant.<br>a. 1.029<br>b. 1.029<br>c. 1.031 | R.<br>1.029<br>and<br>mid.<br>L.<br>a. 1.029<br>b. 1.031<br>c. 1.034 | R.<br>1.026<br>L.<br>a. 1.026<br>b. 1.031<br>c. 1.033<br>post.<br>1.039 | R.<br>1.043<br>L.<br>1.043<br>a. 1.035<br>b. 1.031<br>c. 1.034<br>post.<br>1.039 | R.<br>1.039<br>L.<br>1.043<br>1.035 | 1.041<br>1.043<br>1.041 |       |          |

|         |    |    |    |  |  |  |  |   |   |
|---------|----|----|----|--|--|--|--|---|---|
| XXXVIII | 65 | M. | 32 |  | R.<br>Central pneumonia, with a gangrenous cavity<br><i>a.</i> 1.029<br><i>b.</i> 1.031<br><i>Brain much congested;</i> dura abnormally ad-<br>herent anteriorly; extreme thickening and<br>opacity of arachnoid on either side of mid-<br>line; considerable increase of sub-<br>arachnoid fluid; membranes stripped freely<br><i>b.</i> 1.031<br><i>c.</i> 1.031<br>from convolutions; increase of fluid in ven-<br>tricles; fornix almost effluent. | R.<br><i>a.</i> 1.029<br><i>b.</i> 1.031<br><i>c.</i> 1.029<br>R.<br>to 1.030<br>L.<br>1.041<br>a. 1.029<br>1.041<br>1.032 | R.<br>1.027<br>a. 1.033<br>L.<br>1.043<br>a. 1.033<br>1.043<br>1.039 | R.<br>1.043<br>L.<br>1.040<br>L.<br>1.040<br>1.043<br>1.043 | R.<br>1.040<br>L.<br>1.040<br>L.<br>1.043<br>1.043<br>1.039 |
| XXXIX.  | 70 | M. | 26 |  | Chronic mania, with delusions; extensive pneu-<br>monia of right lung; long continued dia-<br>rhea; slight recent pleurisy and peritonitis;<br>medium vascularity of brain; arachnoid<br>much thickened and opaque, adherent to<br>dura in some parts anteriorly; portions of<br>gray matter removed, with membranes from<br>anterior convolutions; sub-arachnoid fluid<br>small in quantity; ventricles filled with<br>fluid.                         | R.<br><i>b.</i> 1.034<br>L.<br><i>b.</i> 1.034<br>1.038  | R.<br>1.024<br>a. 1.034<br>L.<br>1.044<br>a. 1.034<br>1.044          | R.<br>1.044<br>L.<br>1.038<br>1.044<br>1.038                | R.<br>1.038<br>L.<br>1.044<br>L.<br>1.044<br>1.038          |
| XL.     | 83 | F. | 26 |  | Chronic mania and senile dementia; diarrhoea;<br><i>great congestion of brain;</i> general opacity of<br>arachnoid, especially over middle and post.<br>lobes, slight increase of fluid beneath; con-<br>volutions, not much wasted; membranes<br>stripped off easily; ventricles filled with<br>fluid.  | R.<br><i>b.</i> 1.033<br>L.<br><i>b.</i> 1.033   | R.<br>1.041<br>L.<br>1.041<br>a. 1.033                               | R.<br>1.043<br>L.<br>1.043<br>L.<br>1.041                   | R.<br>1.041<br>L.<br>1.041<br>L.<br>1.041                   |

## ANALYSIS OF TABLES.

A mere glance at the tables will show remarkable variations, not only in the specific gravities of the several parts in each brain, but also in the amount of relative variation in the specific gravities of the several parts, when different brains are compared with one another. The number of cases examined by myself is as yet too small to justify my attempting to make anything like an elaborate analysis of results at present, and, therefore, I shall content myself with pointing out, under each head, a few of what appear to be the most constant and noteworthy facts observed, as well as comparing the results of others, so far as they have gone, with my own. The observations on the specific gravity of the gray matter will, however, require to be entered into pretty fully.

## GRAY MATTER.

*Sane.*—Some of the most interesting facts that I have ascertained from my experiments upon the specific gravity of the different parts of the brain are:—that the gray matter of the convolutions has not a uniform density throughout; that its average specific weight is less on the upper frontal convolutions than it is on the ascending parietal convolutions, and less here than it is on the upper occipital convolutions; that the amount of difference between the convolutions on the same side is more constant than the amount of variation found to exist between the specific gravities of corresponding convolutions on the two sides of the brain; that, as far as observations have yet gone, the convolutions on the left side of the brain appear very frequently to have a higher specific gravity than those of the right; and also that these variations in specific gravity seem to depend very slightly, if at all, upon differences in amount of congestion or quantity of blood in the part, but rather to be dependent upon some intrinsic differences in the intimate structure of the gray matter itself in these various regions. The evidence on which these conclusions rest will be found in the following results, obtained from an analysis of the numbers recorded in the tables.

AVERAGES AND EXTREMES  
OF  
GRAY MATTER.

|                    |  |           |  |                      |
|--------------------|--|-----------|--|----------------------|
| Left<br>Hemisphere | $\left. \begin{array}{c} 1.026 \\ \dots \\ 1.035 \end{array} \right\}$ | Frontal   | $\left. \begin{array}{c} 1.025 \\ \dots \\ 1.035 \end{array} \right\}$ | Right<br>Hemisphere. |
|                    | $\left. \begin{array}{c} 1.027 \\ \dots \\ 1.035 \end{array} \right\}$ | Parietal  | $\left. \begin{array}{c} 1.027 \\ \dots \\ 1.035 \end{array} \right\}$ |                      |
|                    | $\left. \begin{array}{c} 1.029 \\ \dots \\ 1.037 \end{array} \right\}$ | Occipital | $\left. \begin{array}{c} 1.029 \\ \dots \\ 1.037 \end{array} \right\}$ |                      |

The above table seems at once to reveal two principal facts:—  
(a), that the specific gravity of the gray matter differs in various regions of the cerebrum; and (b), that the average specific gravity in all three regions is higher on the left than the right side.

a.—On both sides of the brain, gray matter of the lowest average specific gravity is met with when taken from the upper frontal convolutions, whilst it is a little higher with gray matter from the ascending parietal, and higher still from the upper occipital convolutions. The average increment of increase is exactly .002 in each case, with the exception of that between the left frontal and parietal where it is less.

Although the *average* specific gravity of gray matter from the ascending parietal convolutions is intermediate between that of the frontal and occipital convolutions it is by no means always so in the individual cases, as a glance at the tables will show. In 27\* cases its relations were as follows:

| Parietal same as frontal. |                    | Parietal intermediate. |                    | Parietal same as occipital. |                    |
|---------------------------|--------------------|------------------------|--------------------|-----------------------------|--------------------|
| <u>Left side.</u>         | <u>Right side.</u> | <u>Left side.</u>      | <u>Right side.</u> | <u>Left side.</u>           | <u>Right side.</u> |
| 12                        | 13                 | 6                      | 8                  | 9                           | 6                  |

Thus in nearly one half of the total number of cases the specific gravity of the parietal convolutions has been found—on one side or another—sometimes on both, the same as that of the frontal convolutions.

In two cases (xvi and xx) the specific gravity of the gray matter of the convolutions was the same not only in all these different regions of the brain, but also on the two sides, whilst in three other cases (iv, ix, xxix) there was this uniformity on one side

\* Adding to the twenty-five Nos. I and II.

only. In four other cases (III, XV, XVII, XXIX) the specific gravity of the frontal gray matter was *less* on one side of the brain than that from the parietal convolutions of the same side. And lastly, in some cases the *amount* of difference between the gray matter of the frontal and occipital convolutions was very remarkable; in two cases (XIII and XIX) this difference on one side was as much as 0·1, and in another (XII) there was a difference on both sides of 0·007.

It might perhaps be imagined that this different specific gravity of the gray matter from the three regions in question could be accounted for by varying amounts of blood in the tissues due to mechanical congestion, or gravitation of this fluid after death. But it does not seem to me that this will afford a sufficient explanation of the facts; and after a due consideration of the points to which I will now call attention, I am inclined to believe that this variation is rather dependent upon some intrinsic differences in histological structures and composition than upon the mere accident of amount of blood contained in the part. The points which have influenced me in forming this opinion are the following:—that we find there are great differences in the specific gravity of gray matter generally, in different persons, which cannot be accounted for merely by differences in vascularity; that the kind and extent of variation, in specific gravity, met with in the same person, not only between the two sides but also on the same side of the cerebrum, seems opposed to this method of causation, for, as before stated, in just one half of the cases, the specific gravity of the frontal gray matter is found to coincide with that of the parietal, and, frequently, the specific gravities differ notably on the two sides of the brain, when no corresponding changes can be detected in the amount of congestion; and lastly, there is not that amount of concomitant variation met with which we should expect to find if degree of vascularity was the real cause of the difference.\* For, in illustration of this latter point, we do not find that the greatest differences have been met with in cases of extreme congestion, and the greatest uniformity in those in which the brain has been anaemic. In the three cases cited above as those in which the greatest amount of difference was met with, in that in

\* Since this was written, I have made two post-mortem examinations of persons who were laid in the *prone* instead of the supine position, almost immediately after death, and so allowed to remain during the interval of more than twenty-four hours intervening between the death and autopsy. Notwithstanding this reversal of important conditions, differences of a similar kind were met with between the specific gravity of the frontal and occipital gray matter. In these particular instances, in fact, the discrepancy happened to be very great, since in one case the specific gravity of the occipital gray matter exceeded that of the frontal by 0·004, and in the other (a case of general paralysis) by as much as 0·009.

This seems pretty conclusive evidence that the difference is for the most part independent of the degree of congestion, and due rather to histological structure, even were this not also rendered still more probable by recent observations of Mr. Lockhart Clarke. ('Proceed. of Roy. Soc.', vol. xii (1863), p. 716.)

which this condition was most marked, there was only a medium state of vascularity, in another the brain was actually anaemic, whilst in the third (xix), though the brain was congested, the great increase in the specific gravity was met with only on one side, and even then only in some parts of the occipital convolution. Whilst an inspection of the results obtained from those cases in which the congestion was sufficiently pronounced to be noted (i, vi, ix, x, xv, xvi, xix, xxI, xxix), will not show that they were remarkable also for differences in the specific gravity of the gray matter—in four or five of them, indeed, it is quite the reverse, and in one especially (xvi), although the brain is noted as being “considerably congested,” an uniform density of gray matter was found in all three situations, and on both hemispheres.\*

There is one other condition which may well be supposed to exercise an influence upon the specific gravity of the gray matter, and that is the amount of sub-arachnoid fluid met with after death. Owing to the recumbent position of the body the occipital and parietal convolutions would be most frequently exposed to its influence, and the effects of contact most likely to be produced would be a diminution in the specific gravity of the gray matter of these parts from an absorption of a fluid specifically lighter than itself. Of course it is extremely difficult in any particular cases to say that such a change has been produced, because we can have no knowledge of what the density of the gray matter was before its exposure to this influence.† The cases in which I have noted a marked increase in the amount of this sub-arachnoid fluid are Nos. xxix, xx, xxvi, xi, xxxiii; but they are too few to enable us to form any opinion upon this subject, and the evidence they afford cannot be said to point in any definite direction.

b.—An inspection of the table before given of the specific gravities of the gray matter shows, that in each region the average density is greater on the left than on the right hemisphere, and curiously enough, the amount of difference in the averages is almost the same in each region; thus, the average density of gray matter from the upper frontal convolution of the left side is heavier by .0015 than of that from the right side, whilst, in both parietal and occipital convolutions, the excess in favour of left side is .0014. Although the averages are higher on the left side, the specific gravity is only actually so in a certain proportion of individual brains; in the majority, indeed,

\* I may again state here that in removing the gray matter from the occipital convolutions, it was always done with a knowledge of the fact of its lesser depth in this region, and that, accordingly, I always took extra care, and removed thinner slices in order to estimate its specific gravity in this situation.

† It may well be that during the life of the individual, and the active nutritive changes going on in the part, that no absorption may take place, whilst such an effect may follow after death when there is nothing to interfere with or modify the ordinary physical laws.

there is an equality between one or more regions of the two sides, whilst in a few cases (and more especially in the occipital region) the density has been greater on the right side. The following table, illustrating these points, shows the results of an analysis of twenty-seven cases :—

| Regions.        | Density greatest on right side. | Density greatest on left side. | Density equal on two sides. |
|-----------------|---------------------------------|--------------------------------|-----------------------------|
| Frontal .....   | 1                               | 7                              | 19                          |
| Parietal .....  | 2                               | 12                             | 13                          |
| Occipital ..... | 4                               | 9                              | 14                          |

In one case (iv) all the specific gravities on the left side exceeded those on the right; in seven, all the numbers were respectively equal to one another on the two sides, but in no case did all the numbers of the right side exceed those of the left.

In connection with this higher average specific gravity of gray matter on the left side, it is well to bear in mind the fact that Dr. Boyd,\* in his extensive investigations upon the weight of the cerebrum has almost invariably found the left hemisphere heavier, by about one eighth of an ounce, than the right.

*Insane.*—My observations have been so few and incomplete on this subject, that I have little to say concerning it. So far as they have gone, however, they seem to bear out the conclusions of Skae and Bucknill, that the specific gravity of the gray matter is higher in the insane than in the sane. It will be interesting, hereafter, to see the results of an investigation of the specific gravity of the gray matter in the insane, when taken from different regions, in a large number of cases.

In the eleven cases which I have yet examined, I have found the mean specific gravity of gray matter from the parietal convolutions to be 1.0325, the extremes being 1.029 and 1.037.

#### *Comparison of Method and Results of Preceding Observers with my own.*

The great discrepancies between the results arrived at by previous observers and myself, as to the specific gravity of gray matter in both sane and insane, make it desirable that some definite statements should be made concerning our respective methods.

\* 'Philos. Trans.,' 1861, and 'Med.-Chir. Trans.,' vol. xxxix.

It does not appear that either Sankey, Skae, or Bucknill were very particular as to the precise convolutions from which they selected gray matter for examination. In reply to a question on this subject, Dr. Sankey writes : "I generally (I believe I may say always) took the cerebral substance from the part opposite the parietal protuberance." Dr. Skae answers, "I regret to state that I made no distinction, as to the particular part of the brain from which I selected portions in order to ascertain the specific gravity of the gray matter. Nor did I restrict myself to any particular thickness of the portion taken ;" whilst, as Dr. Bucknill made no reply to this particular query, I can only presume that it was not a point to which he particularly attended. The fairest way will be, therefore, to compare the mean results which I have obtained from an examination of the gray matter of the *parietal* convolutions with those obtained by other observers. These results I will now place side by side.

|                | Sane.   | Insane.                    |
|----------------|---|----------------------------|
| Sankey .....   | { 1·028<br>1·0346*<br>1·046                   |                            |
| Skae .....     |   | { 1·030<br>1·0391<br>1·049 |
| Bucknill ..... |   | { 1·030<br>1·037<br>1·048  |
| Bastian .....  | { 1·027 .....<br>1·0300† .....<br>1·035 ..... | { 1·029<br>1·0325<br>1·037 |

An examination of these numbers will show that mine, both for sane and insane, are between five and six degrees lower than those of other observers, and after careful inquiries on this subject, I think that these discrepancies may be accounted for, for the most part, from a difference in our method of operating, though to a less extent owing to differences in the relative proportions of acute and chronic cases examined.

With regard to method, Dr. Skae states, as we have just seen, that he restricted himself to no particular depth of the gray matter taken for examination ; Dr. Bucknill writes, "I always took the

\* There seems reason to believe that this is not the correct average of the seventy-three cases in which Dr. Sankey investigated the specific gravity of the gray matter—there must either have been a misprint, or some slight mistake made in estimating the average. At p. 242 (Brit. and For. Rev., 1853) he states the average of gray matter in the thirty-six males to have been 1·0353, and of the thirty-seven females 1·0349. The mean of these two numbers would give 1·0351 as the general average, and an examination of his table (1), p. 250, also makes it probable that this is the more correct average.

† These numbers refer to the left side ; the average on the right is even lower, being 1·0296.

whole thickness of the gray substance, shaving it, with a sharp thin knife, from the cerebral convolution;" whilst Dr. Sankey says, "I usually slice off a long strip from the top of a convolution, and divide it into pieces for the experiment." The method which I adopted was this:—having stripped off the membranes from the particular convolution that I was about to examine, I carefully sliced off with a sharp knife a *small*, somewhat elliptical portion of gray matter from the surface of the convolution, taking particular care not to include the deepest layers of the gray matter, so as to do away with every possible chance of including even the slightest admixture of white substance. From transverse sections of the convolution afterwards made at the spot, I have ascertained that my slices, at the farthest, penetrate as far as the upper two thirds of the depth of the gray matter, and sometimes have been even rather less in depth than this. A short time since, as soon as I became aware of the exact method adopted by Dr. Bucknill, I procured a brain, in order to make some comparative experiments upon the specific gravity of its gray matter by our respective methods. I found that it was only by the exercise of the very greatest caution that I could accurately separate the whole of the gray matter from the white without including some small portion of this latter substance, and that, too, when I had operated under the most favorable conditions, by cutting a portion of a separated convolution in such a manner as to leave only a small cubical or rectangular piece of gray matter to be shaved off from the white substance—the brain fragment at the time lying on a smooth, flat surface. I always examined the surface of the gray matter, and frequently found some minute laminæ of white substance at one or other corner of the section which had been removed with the gray matter. Of course, if one attempted to slice off the whole of the gray matter from the convolutions still *in situ*, this would be a matter of still greater difficulty, since we could not so accurately lay the edge of the knife upon the line of junction of the two substances as we are able to do with small separated fragments of brain.\* When, however, cubical fragments consisting of nothing but gray matter, and including its whole depth, were taken for examination, I almost invariably found that the specific gravity of such a portion was .004 higher than that of a portion taken, as I have been in the habit of doing, from a contiguous portion of the

\* In ascertaining the specific gravity of the gray matter by taking portions including its whole depth, to ensure accurate results capable of comparison with others, it is absolutely necessary that the gray matter should be cut off in little cubical blocks, or of some symmetrical form, so as in all cases to take the same superficial area of surface and deep strata. A portion removed from a convolution *in situ*, with shelving edges, would necessarily include an undue proportion of the specifically lighter superficial strata. Seeing that the difference between these upper and lower strata is as much as .004, inattention to this point would considerably modify the correctness of the results.

same convolution. If even a minute portion of white substance had been removed with the total thickness of gray matter, this difference was still further increased. As on former occasions, I had no difficulty in obtaining uniform results, with any number of small pieces, removed by my method from the same convolutions. So that it would appear that there are no particular differences in the density of the upper strata of gray matter, although that of the lowest strata is considerably higher, owing, probably, to the large intermixture of tubular fibres entering them perpendicularly from the central white substance of the cerebrum.

In the brains of both sane and insane persons I have found the specific gravity of the gray matter from the parietal convolutions varying, at the most, only by a difference of .008, whilst Drs. Bucknill, Sankey, and Skae have each found a difference of .018 between their highest and lowest specific gravities of gray matter. Seeing that my minimum coincides almost exactly with theirs, I think that their high numbers must be due, in great part at least, to their having included, in these cases, the deepest as well as the more superficial portions of gray matter, and I cannot help thinking that the very great difference between their maxima and minima may be accounted for to a certain extent by differences in the thickness of gray matter taken for examination in the various cases.

Another reason of some importance accounting for the differences in our observations, is the fact that, amongst Dr. Sankey's cases, a larger proportion were acute, dying with cerebral symptoms, than existed in the number that I examined. And in these cases he has almost invariably found a higher specific gravity of the gray matter. It must be borne in mind, also, that the great bulk of his observations were made upon the brains of persons who had died from typhus or typhoid fever, one of the tendencies of both of which diseases seems also to be the production of a high specific gravity of the cerebral substance. In the insane cases of Bucknill and Skae, also, there were a certain number who died in the acute stages of their cerebral disease, whilst the few that I have as yet examined were all chronic cases.

#### WHITE MATTER.

We meet with far greater uniformity of results when we compare the observations of different investigators, upon the specific gravity of the white matter of the cerebrum, as may be seen by the numbers given below.

|                | Sane.   | Insane.   |
|----------------|---|---|
| Sankey .....   | $\left\{ \begin{array}{l} 1.032 \\ 1.0412 \\ 1.048 \end{array} \right.$ |   |
| Bucknill ..... |   | $\left\{ \begin{array}{l} 1.033 \\ 1.039 \\ 1.046 \end{array} \right.$  |
| Skae.....      |   | $\left\{ \begin{array}{l} 1.034 \\ 1.0424 \\ 1.053 \end{array} \right.$ |
| Bastian .....  | $\left\{ \begin{array}{l} 1.031 \\ 1.0404 \\ 1.043 \end{array} \right.$ | $\left\{ \begin{array}{l} 1.026 \\ 1.0405 \\ 1.042 \end{array} \right.$ |

The average specific gravity of the white substance of the cerebral hemispheres seems to correspond pretty closely, in both sane and insane brains. The very low numbers correspond, in my own observations, with portions of brain-substance which were obviously in a condition of *ramolissement*, or white softening (III, xxiii, xxxvii), and I have no doubt this was also found to be the case by the other observers. It is only when the specific gravity of the gray matter sinks below 1.035, that the softening becomes very obvious to the unaided senses. In No. xxvi, where there had been right hemiplegia of four days' duration, a sinking of the specific gravity of the white substance of the opposite hemisphere to 1.035 was recognised by means of the specific gravity apparatus, though no appreciable softening had been detected at the ordinary post-mortem examination. The *prevailing* specific gravities of the white substance of the cerebrum, are 1.039, 1.040, or 1.041, and the very high numbers reported by Sankey, Skae, and Bucknill, have mostly been met with in acute cases, and doubtless were obtained from portions of brain in a distinctly indurated condition.

In no instance have I found the specific gravity of the gray matter higher than that of the white in the same brain, and in one case only have I met with it of the same specific gravity. In this case (xiii), in which the death was sudden, and the cause rather obscure, the occipital gray matter on the left side, and the white substance of both hemispheres had each a specific gravity of 1.037; in this same case, also, the maximum difference between the specific gravity of frontal and occipital gray matter was met with.

The density of the white substance of the two hemispheres seems to be normally the same.

#### FORNIX.

The specific gravity of the fornix, as originally indicated by Dr. Sankey, seems to be normally less than that of the white substance of the hemispheres. It varies much in its density in different individuals, and the numbers I have met with have been the following:—

| Sane.        | Insane.       |
|--------------|---------------|
| 1·025        | 1·024         |
| <b>1·032</b> | <b>1·0302</b> |
| 1·039        | 1·037         |

The highest specific gravity, 1·039, was found in a case of epilepsy (xvi), and the lowest in a case of chronic mania (xxxix), the subject of which died at an advanced age from an exhausting disease, in a condition of extreme emaciation.

The specific gravity of the fornix seems to be generally lower in the insane than in the sane, and its density seems to be, to a certain extent, independent of the amount of fluid in the ventricles. Thus in Cases xxxix, xl, so far similar, that both, being at an advanced age, and having the lateral ventricles "*filled with fluid*," were examined the same number of hours after death, still the specific gravity of the fornix in one was 1·024, and in the other 1·031.

#### CORPORA STRIATA.

No observations have, I believe, been hitherto recorded concerning the specific gravities of the corpora striata apart from the optic thalami; and it was not till just at the commencement of my observations upon the specific gravity of the sane brain, that I became aware of the different densities of its intra- and extra-ventricular portions. In the insane cases, therefore, observations have only been made concerning the specific gravity of the intra-ventricular portions of these bodies, the pieces for examination being taken in the manner indicated at p. 475. The averages and extreme numbers met with, have been as follows :—

|                                  | Sane.               | Insane.       |
|----------------------------------|---------------------|---------------|
| a. Intra-ventricular portion ... | 1·031 .....         | 1·033         |
|                                  | <b>1·0350</b> ..... | <b>1·0354</b> |
|                                  | 1·041 .....         | 1·039         |
| b. Extra-ventricular portion ... | 1·039               |               |
|                                  | <b>1·0416</b>       |               |
|                                  | 1·043               |               |

The observations upon the insane have, as yet, been too incomplete and few in number to make a comparison of results derived from them, and from the sane respectively, of much value. So far as they have gone, however, there seems to be no particular difference in the two classes.

Normally, the corresponding parts of these bodies seem to be of the same specific gravity on the two sides of the brain. The *prevailing* specific gravities—in fact, those met with in one half of the sane cases, have been 1·035 for the intra-ventricular portions, and 1·041 for the deep extra-ventricular portions.\*

\* From some experiments which I have made, it would appear that the difference in density of these two portions depends to a great extent upon the different

This gives a difference of .006, but in one fifth of the cases there has been a difference of .01, whilst in two of the cases in which the maximum specific gravity (1.043) of the deep portion has been met with, that of the superficial portion has been as high as 1.041, therefore presenting a difference of only .002. One of these cases (xv), was that of a drunkard, of middle age, who died from delirium tremens and pleuro-pneumonia; whilst the other (xx), was that of a female, æt. 55, who died of phthisis, but concerning whose habits there is no record.

In Case xxxi, a softened patch in the deep portion of the corpus striatum had a specific gravity of 1.031, which is about the same number as we have seen belongs to the softened white matter of the hemispheres.

There is no evidence at present to show whether the amount of ventricular fluid would have any influence upon the specific gravity of the superficial portions of the corpora striata, since in only one of the sane cases (xxv) were the lateral ventricles found filled with fluid. In this case, it is true, the minimum specific gravity was met with, but then in the same brain, some of the other numbers were unusually low. And although amongst the insane in each of the five cases xxxvi—xl, inclusive, the ventricles were filled with fluid, and at the same time presented the ordinary specific gravities of these parts—in one case, indeed, notably above the average—still, since from the data before us, we cannot be said to know what is the ordinary specific weight of these bodies in the insane, it may possibly be that they are usually denser in them than in sane individuals, and that the numbers in the above cases represent only their specific gravity, after this has been lowered by an absorption of ventricular fluid.

#### OPTIC THALAMI.

As with the corpora striata, there has not been, hitherto, any separate estimation of the specific gravities of the optic thalami.

amounts of fluid which respectively enter into their composition. Thus, a slice about  $\frac{1}{4}$ " thick of a corpus striatum, including both superficial and deep portions, having been exposed on a tray for two hours to the influence of the atmosphere at a temperature of 71° Fahr. (20 $\frac{4}{5}$ ° C.), whilst another similar portion was immersed in water for the same time, the alterations in density were these—

| Before experiment. | After experiment.<br>(Air.) | After experiment.<br>(Water.) |
|--------------------|-----------------------------|-------------------------------|
| a. 1.035           | a. 1.043                    | a. 1.029                      |
| b. 1.043           | b. 1.047                    | b. 1.031                      |

Thus, the superficial portion increased in density twice as much as the deep by evaporation from exposure to the atmosphere, whilst by immersion in water the deep portion diminished in density twice as much as the superficial owing to an increased absorption of fluid. Of course, a part of this lowering of the specific gravity with both portions may have been due to an exosmosis of saline matter.

The averages and extremes of specific gravity of these bodies found by myself in sane and insane, are as follows :—

| Sane          | Insane.      |
|---------------|--------------|
| 1·039         | 1·039        |
| <b>1·0422</b> | <b>1·044</b> |
| 1·045         | 1·045        |

The extremes are seen to be the same in both classes, though the average is higher in the insane ; the number of cases is, however, too small to justify us in coming to any positive conclusion with regard to their proportionate density in the two classes.

The *prevailing* number in the sane is 1·043, this being met with in fifteen out of the twenty-five cases. The minimum number was met with several times, but the maximum only once, and that in a drunkard (xv), who died of delirium tremens and pleuro-pneumonia. The same high number was met with amongst the insane in a case of epilepsy (xxxiv), and both, being men of the same age, presented also a rather high specific gravity of the fornix.

Normally, the specific gravities of these bodies seems to be the same on the two sides of the brain. In three cases only has a slight difference been met with in this respect.

Of the six cases in which the specific gravity of the corpus striatum and optic thalamus, taken together, was estimated on each side by Professor Aitken, in the brains of sane individuals, there was one notable case of chorea, in which the specific gravity of these bodies on the left side was 1·031, and on the right only 1·025. The difference is remarkable, but in addition to that, even the highest of these numbers is very considerably below the average, and in fact corresponds to what I have met with as the specific gravity of a softened patch of the corpus striatum, and of the white matter of the cerebral hemispheres, when a notable degree of *ramolissement* has taken place. In two other cases, the specific gravities were unusually high on both sides. The one in which the numbers were highest was a case of typhus fever, the man having died on the twenty-first day of the disease. In this case, the specific gravity of the cerebrum and the cerebellum were also very high, and so far this is in harmony with the fact, that, in two cases of this disease, Dr. Sankey found the specific gravity of the white matter of the cerebrum remarkably high.\*

#### CEREBELLUM.

The specific gravity of the cerebellum has frequently been made a subject of investigation, as may be seen by reference to the table at p. 471. Dr. Bucknill has directed his attention to the specific gravity of the whole organ in the insane, and Drs. Aitken and

\* Loc. cit., p. 254.

Peacock to the same in the sane. There is, however, the objection to the method employed by Dr. Bucknill and Dr. Aitken, that they did not strictly ascertain the specific gravity of the whole organ, but of parts including both gray and white substance, which they considered representative. This objection, however, has not nearly so much force in the case of the cerebellum, as it has in that of the cerebrum, owing to the identity, or slight difference only, in the separate specific gravities of the gray and white substance in the former organ. Dr. Skae's observations, of a more analytical kind, made upon the separate specific gravities of the gray and white substance in both sane and insane, are the only ones with which I can compare my own observations. Unfortunately, however, I did not ascertain the specific gravity of the white matter in any of my insane cases, and in only about three-fifths of the brains of sane persons. Our results were as follows :—

| Observers.    | Sane.         |  |  | Insane.       |  |                                  |
|---------------|---------------|--|--|---------------|--|----------------------------------|
|               | No. of cases. | Gray.  | White.   | No. of cases. | Gray.  | White.                           |
| Skae .....    | 5             | <b>1·042</b>   | <b>1·0433</b>  | 27            | $\left\{ \begin{array}{l} 1·036 \\ 1·040 \\ 1·044 \end{array} \right.$           | $1·0430$<br>$1·0438$<br>$1·0444$ |
| Bastian ..... | 25            | $\left\{ \begin{array}{l} 1·035 \\ \mathbf{1·0395} \\ 1·043 \end{array} \right.$ | $\left\{ \begin{array}{l} 1·037 \\ \mathbf{1·0399} \\ 1·043 \end{array} \right.$ | 11            | $\left\{ \begin{array}{l} 1·038 \\ \mathbf{1·0396} \\ 1·044 \end{array} \right.$ |                                  |

These numbers are too small to draw anything like satisfactory conclusions from, but so far as they go, Dr. Skae's figures show a greater discrepancy between the specific gravity of the gray and white matter of the cerebellum in the insane than in the sane, with an absolutely less specific gravity of the gray matter in the former than in the latter. His numbers are also, as with the cerebrum, all higher than mine. A comparison of my own numbers, shows even a closer approximation between the specific gravity of the gray and the white matter in the sane than in Dr. Skae's observations, whilst the specific gravity of the gray matter in the insane is almost equal to that of the sane in mine, rather than less, as in Dr. Skae's cases. Whether the same discrepancy would have been met with between the white and gray matter of the cerebellum in my insane cases, as was found by Dr. Skae, I am unfortunately unable to say. Taking into consideration, therefore, these results of Dr. Skae and myself, from an examination of the white and gray matter separately, in conjunction with the results of the examination of the whole cerebellum, as given in the table at p. 471, it does not appear that as yet we have evidence to show that any definite difference exists between

the specific gravity of the cerebellum in the sane and the insane, and that therefore we must look upon the conclusion of Dr. Skae, "that the specific gravity of the cerebellum is increased in insanity," as one which more recent observations have shown to have no sufficient foundation.

An examination of my sane cases will show that in ten out of the sixteen in which the specific gravity of the white matter was estimated, this was found to be precisely the same as that of the gray, whilst of the six remaining cases, it was slightly less in two (xii, and xiii), and slightly higher in four (x, xxiv, xxv, xxviii).

This different proportion between the specific gravity of the gray and white matter in the cerebrum and cerebellum, respectively, is due to a change in the density of the gray matter, which is much greater in the cerebellum than in the cerebrum, whilst the specific gravity of the white matter is almost identical in both.

The minimum number for the specific gravity of the gray matter 1.035, has been met with three times (iii, xxv, xxvi), and the maximum number, 1.043, just as often (ix, xvi, xxii).

The specific gravity of the gray matter on the two sides of the cerebellum has always been found the same, with one exception—that being in a case of general paralysis.

#### PONS VAROLII.

The specific gravity of the pons alone has not, I believe, hitherto been made the subject of investigation, therefore there are no numbers with which to compare my own results. The following are the averages and extreme numbers met with, from an examination of the brains of twenty-five sane, and of nine insane individuals :—

| Sane.         | Insane.       |
|---------------|---------------|
| 1.039         | 1.041         |
| <b>1.0424</b> | <b>1.0444</b> |
| 1.045         | 1.045         |

The average is slightly higher here in the insane than in the sane, but then the number of cases examined has been very small.

The *prevailing* specific gravity in both sane and insane, is 1.043; this number was met with in 13 of the 25 cases in the former category, and in 4 out of the 9 belonging to the latter. The maximum numbers have been the same in each class. The minimum number of the sane, 1.039, has been met with only in two cases (vii, xiii).

The average specific gravity of the pons seems higher than that of the white matter of the cerebellum, and corresponds almost exactly with that of the optic thalami, but, in individual brains, the actual numbers do not correspond in more than about one half of the total number of cases, whilst in the others they differ by .001—.003, from one another.

In one brain of an insane man (xxxiii), the specific gravity of the pons was as much as .005 higher than that of the optic thalami, and .006 higher than that of the white matter of the cerebellum.

The pons varolii and optic thalami have a higher mean specific gravity than any other part of the encephalon.

### MEDULLA OBLONGATA.

I have been able to find no record of the specific gravity of the medulla alone. From an examination of twenty-four sane cases, I obtained an average specific gravity for this portion of the encephalon, of 1.0360, the extremes being 1.035 and 1.039. As yet, I have only ascertained its specific gravity in the brains of three persons dying insane, and in these cases the numbers were 1.038, 1.039, and 1.041—the last being met with in a case of general paralysis (xxxvii).

The *prevailing* number met with in two thirds of the sane cases was 1.035.

Dr. Peacock's observations give 1.0403 as the mean specific gravity of the combined pons and medulla; but seeing that the specific gravities of these two parts differ so much from one another, and are liable to vary independently, it does not seem desirable that observations on their combined specific gravity should be continued.

### *Principal circumstances influencing the specific gravity of the different parts of the Encephalon.*

This is a subject of the utmost difficulty, and could only be handled satisfactorily after the examination of a very large number of cases. The main difficulty arises from the fact, that we are unable to see the *uncomplicated* effects of almost any one possible cause of modification, because in every case in which the one condition, whose influence we wish to ascertain exists, it is almost sure to be complicated with one or more other conditions, each of which is in itself either a known or possible cause of change. How very difficult, if not impossible, therefore, is it to deduce trustworthy conclusions, from a limited series of cases, as to the influence of any one condition existing in all the numbers of this series, when, in each case, this condition in question is associated with one or more others (in all possible combinations) some of which may be more potent for the production of change even than that whose influence it is desired to ascertain; whilst these other potencies, whether superior or inferior, are acting sometimes with and sometimes against, the one in question. These, surely, are not the conditions for legitimate experimentation, and conclusions thus

derived must be received with the very greatest caution, as being little else than mere gropings in the dark. I shall, therefore, have little to say on this subject, and shall confine myself principally to an inquiry, as to how far my own observations would seem to bear out the conclusions of Dr. Sankey.

*Influence of Sex.*—My data are altogether too limited to permit me to say anything under this head, since in my twenty-five cases there were only five females.

Dr. Sankey thought his numbers tended to show “that there is a great similarity in the density of the white substance in the two sexes,” and that, “while the mean density is slightly higher in males than in females, \* \* \* \* the most frequent density in females is higher than that which is most frequent in males.”

*Influence of Age.*—Dr. Sankey thinks his table “appears to show that the density of the gray matter is highest between the ages of fifteen and thirty years in males, and twenty and thirty in females, or between twenty and thirty, sex not considered;” and also, “that there is very little variation in the density of the white matter at different ages.”

No confirmation whatever of this conclusion concerning the gray matter is to be found from an inspection of my own cases (arranged in order of age); and from the fact of the numbers referring to the specific gravity of the gray matter of two children (I and II), each two years old, being nearly all of them above the averages obtained from other twenty-five cases, it would appear that even at this early age, when the brain is admitted by all observers to be in an immature condition, that the gray matter, nevertheless, has attained pretty nearly its mean density, unless we are to credit the diseases from which they had been suffering with an unusual amount of influence in raising the specific gravity of the gray matter. In only three out of the eight cases,\* whose ages are included within this period of maximum density, are the specific gravities of the gray matter higher than those met with in the two very young children just alluded to; and in two of the remaining five cases, one a man, æt. twenty-four, dying in the third week of typhoid fever; and the other, a man of the same age, dying after a very short illness from the effects of a surgical operation, the numbers were actually lower than those found in the two children only two years old. It cannot be said either that an inspection of my cases seems to indicate any alteration of the specific gravity of the gray matter in old age. At all events, no approach to a regular increase or decrease is to be seen; and it would seem that the irregular variations met with must be dependent upon other causes more potential than simple variations in age. I think that at present, therefore, there is no evidence to show that age has a modi-

\* And the total number of males and females examined by Dr. Sankey, between the ages of twenty and thirty, was only nine.

fying influence upon the specific gravity of the gray matter of the cerebrum.

Neither is there any evidence to be gathered from my list of cases tending to show that age has any influence whatever in modifying the specific gravity of other parts of the encephalon. The only fact which it seems desirable to call attention to, is, that in both of these children, only two years of age, the white matter of the cerebrum had a very low specific gravity, as well as the deep portions of the corpora striata, and, in one case also, the specific gravity of the medulla oblongata was below the average, whilst in both, the specific gravity of the gray matter and the pons was fully up to the average. Although the specific gravities of the optic thalami and cerebellum were below the average, still the same numbers that were found in these children have been met with in many adults.

*Influence of Post-mortem Changes.*—Dr. Sankey thinks it appears, from a table which he gives, “that the mean density of the gray matter is less the longer the post-mortem examination was deferred, while, with the white matter, no such effect is apparent;” and also that “there is a pretty regular decrease of density equal to about ·001 for every twenty-four hours that intervenes between the death and the autopsy.” We must say, after due consideration, that Dr. Sankey’s facts scarcely seem to warrant his conclusions.

He seems to have been influenced a good deal in drawing these conclusions from the fact that in six cases, in which the post-mortem examination was made in less than twelve hours after death, he found the *average* specific gravity greater by ·0036 than that obtained from twenty-six cases which were examined at periods a little less than twenty-four hours after death. But then he states that “of the six patients, the post-mortem examination of whom was made thus early, *two had severe cerebral symptoms*, two slight delirium, and two died sensible.” Surely, at the very least, these first two cases should have been omitted from such a calculation; and, if this were done, the discrepancy would be much diminished, so that the fact of the average of four cases, made at a certain period after death, being slightly less than the average of twenty-six made at a certain other period, could have no real weight in determining the influence which the duration of time between the death and the autopsy exercises upon the specific gravity of the gray matter. And more especially is this so when out of these four cases the specific gravity in one was only 1·036, and in another 1·033 (actually a low specific gravity rather than a high one). Neither is there a regular decrease in the remaining three series, since whilst the average specific gravity of nine cases, examined at a mean period of twenty-nine hours after death, was 1·0340, that of nineteen cases, examined at a mean period of forty-four hours after death, instead of being less, as it should have been according to this view, was 1·0347. The “direct experiment,”

also, which Dr. Sankey introduces to show that the supposed diminution in density is due "to changes in the brain after death," appears to us to throw no light whatever upon the question. For how is it possible to judge from the change taking place in the gray matter of a portion of brain, which "was simply wrapped in paper during the time that elapsed between the first and second examination, and lay uncovered in the dead-house on a plate, between the second and third experiments—the weather being cold and wet," as to what would be the changes taking place in a brain still within the unopened cranium.

It appears to me, therefore, that there is no satisfactory evidence to show either what, or whether any, influence is exercised upon the specific gravity of the brain by the length of time intervening between death and the post-mortem examination.

*Connection between absolute weight of brain and the specific gravity of its white and gray matter.*—There seems to be no correspondence whatever between these conditions, and we can quite agree with Dr. Sankey in his conclusion that, "the heaviest brain neither has the lightest specific gravity, nor the contrary; nor has the lightest brain the lowest specific gravity of either white or gray matter."

*Influence of the duration of the last illness on the specific gravity.*—From an examination of one of his tables, Dr. Sankey is inclined to believe that there is "a general tendency in the gray matter to decrease in density as the length of the last illness increases, but the decrease proceeds much less rapidly after the seventh day than it appears to do up to that date." A consideration of the nature of the five cases, in which the examination took place before the seventh day, in conjunction with the fact that a *regular* diminution does not take place in the average specific gravities, given in Dr. Sankey's table, of the gray matter in persons dying after successively longer periods of illness, would of itself be sufficient to show the very unsatisfactory nature of the evidence upon which this conclusion is based. Dr. Sankey admits that the evidence is very slight, but still he seems disposed to attach more weight to it than might have been expected. He seems to think that "in active health the density of the gray matter is usually high," but this seems to be little else than a mere supposition, since it receives no necessary support whatever from the fact that, in many cases of acute disease where the individual dies after a short illness, the specific gravity of the gray matter is found to be high. This high specific gravity may simply be a product of the acute disorder itself, so that it is just as likely that the antecedent specific gravity had been increased by the disease, as to suppose that there was no time to lower the initial high specific gravity of health owing to rapidity of death.

*The influence of the nature of last illness, and of symptoms pre-*

*ceding death.*—This is the influence which it appears to me Dr. Sankey has shown most conclusively to affect the specific gravity of both the gray and white matter of the cerebrum. His observations, as well as those of other observers upon the specific gravity of the brain in the insane, seem to show that in most cases of cerebral disease the specific gravity of the gray matter is above the mean, whilst with regard to the white substance, it may also be either above the mean, or greatly below it, the substance itself being, in the latter case, in a condition of white softening. Dr. Sankey's observations tend to show also that, in granular disease of the kidneys, the specific gravity of the gray matter is generally above the average, though it is not so much affected as it is by cerebral disease.

The mode of death also—whether leading to an anaemic, or a congested condition of the brain—seems to produce some effect upon the specific gravity of the gray matter, but I am inclined to think that this influence is less than it has been represented, and that such as it is, it is principally seen in a slight increase in the specific gravity of the gray matter, whilst it does not appear to affect that of the other parts of the encephalon.

What are the other conditions most influential in producing alterations upon the specific gravity of the brain, is a matter which may, perhaps, be determined in the future; certainly at present the variations met with in the specific gravity of corresponding parts in different brains can be accounted for only to a very slight extent; and, what is even more inexplicable still is, the amount of variation in the relative proportions between the specific gravities of the several parts of the same encephalon. How far some of these differences may be looked upon as mere individual peculiarities, and so far independent of all pathological change, is a question of the utmost interest, but one also upon which it is quite impossible to come to any conclusion at present. At all events, it seems highly desirable that the specific gravity of the different parts of the encephalon should be ascertained in as large a number of sane individuals as possible, so as to learn the kind and amount of variation which could be met with in the brains of persons displaying no anomalous mental symptoms—the amount of change, in fact, compatible with healthy mental action.

It is only after this has been done that we shall be able better to estimate the value of any particular deviation from the normal standard met with in the insane.

After what has been said in the earlier portion of this paper, it would appear almost needless to enforce the necessity of the most zealous attention to every detail tending to increase the accuracy of the results. The investigation is of such a delicate nature that unless it is conducted with a due attention to all the necessary pre-

cautions, the results would be quite valueless. It is of the utmost importance, also, in order that different workers may compare their observations, that they should each take the portions of cerebral substance as nearly as possible from the same situations. And since so large a share of the interest of these investigations attaches to the examination of the gray matter of the convolutions, it is above all things desirable that a uniform method should be adopted for the determination of its specific gravity. Although it would be more desirable, if it could be done with equal facility, and with an equal chance of uniformity, to ascertain the specific gravity of the whole depth of gray matter, still the dangers of error, and the sources of fallacy to be guarded against, are so much greater when this is done, that I think the method I have adopted of taking not more than the upper two thirds in depths to be the more desirable process. I shall continue to make my observations in this way, since in addition to the fact that it gives such a much smaller field for possible error, they can be effected with so much greater ease and rapidity, owing to the precautions necessary for ensuring accuracy being fewer and simpler. It is not likely that changes in the deep strata of the gray matter would be absolutely confined to this portion, and, therefore, its upper and middle strata may be almost as representative of the degree of change in the specific gravity of the gray matter, as if its whole depth were taken.

Estimations of the specific gravity of the different parts of the brain can, however, be considered as only the first steps towards a more thorough knowledge of the pathology of this organ. These investigations will serve to supply us only with the most convenient and trustworthy beacons, indicating the situations where pathological and histological changes are most likely to be found, but as to the nature of such changes this method can reveal little. Recourse must then be had to the aid of chemistry, and this again be supported and abetted by the microscope, in the hands of one who has already made himself thoroughly conversant with the healthy structure and appearances of the different portions of the encephalon. Investigations pursued in this triple method would surely be productive of good results. At all events, the pathology of the brain in the very many obscure forms of cerebral disease, has hitherto so effectually eluded all ordinary methods of research—inquiries into the nature of the changes have been so baffling and confusing—that it behoves us to deviate somewhat from the beaten path, and to bestir ourselves, calling to our aid, if need be, either new means or more effective combinations of old methods, that we may do our utmost to solve this riddle of the Sphinx, and so rid ourselves of an incubus and a cloud now darkening the fields of knowledge.

*On some of the Varieties of Morbid Impulse and Perverted Instinct.\** By W. C. MCINTOSH, M.D. Edin., Medical Superintendent of the Perth District Asylum, Murthly.

THE various forms under which morbid impulses and perverted instincts present themselves have generally been classed by authors under "Moral Insanity" † and "Emotional Insanity," ‡ or each has been titled a mania or monomania. Their occurrence is found to be regulated by the degree of civilisation, mode of life—whether in town or country—and the prevailing tendencies of the age, which indelibly stamps them with its characteristic features. The classification adopted in the following pages is that of Professor Laycock, § which leads us first to examine those connected with the nourishment of the being—

#### *Alimentary.*

"In the instincts of hunger and thirst animals eat and drink before they can know that food and drink induce that pleasant external sensation which constitutes the satisfaction of the instinct. But if the animal become conscious of the object of the instinct the volitional element is added, and the blind impulse of nature co-operates with the inclination of the animal to attain it. The blind instinct is become the volitional instinct for food—the *appetite, gluttony, longing for drinks.*"|| The morbid desires, longings, or impulses for various substances generally regarded with loathing and disgust have been grouped under the head of *Pica*. It is a common feature in the pregnant, chlorotic, and hysterical female, as well as amongst the ordinary occupants of our lunatic asylums. Dr. Laycock, in his 'Nervous Diseases of Women,' mentions many curious examples. Dr. Elliotson narrates in his lectures that a patient has longed for raw flesh, and even for live flesh, so that some have eaten live kittens and rats (!); he saw a young lady who loved to munch brown paper, rather than gilt-edged and hot-pressed; one longs for a bit of a priest's sleeve, and another dips her bread in a tar tab. Certain states of the blood in health and disease also cause an ailment resembling pica; thus, in the arthritic there is often a great desire for flesh, while in the strumous, creatic nausea is equally as common. "There is one general fact, however, namely, that the depraved appetite is usually directed to something dry and tasty; something,

\* It is but fair to state that this paper is an abstract of one written in 1862, as a sequel to two papers which appeared in the 'Psychological Journal' for 1863, and based on the Browne Prize Essay, Univ. Edin., 1860.

† Dr. Pritchard.

‡ Dr. Tuke, 'Psychol. Med.' Bucknill and Tuke.

§ 'University Lectures.'

|| Unzer, p. 163. Translated for the Sydenham Society, by Dr. Laycock.

too, that will endure mastication and make a pleasant crackle. I believe that there are very few chlorotic young women that do not eat dry rice or underground coffee ; more rarely, hard herring uncooked, or salt, mortar, chalk, cinders, sealing-wax, and other dry, tasty, crackly edibles.”\*

“ She can crunch  
A sack of small coal, eat your lime and hair,  
Soap, ashes, loam, and has a dainty spice  
Of the green sickness.”†

The same author relates from Vogel the case of a married woman, who during her pregnancies had been in the habit of taking powdered charcoal to relieve salivation and acidity, and prescribed for that purpose by a physician ; but during the last year and a half she had displayed the greatest liking for eating charcoal, munching it up without any disagreeable sensation, and solacing herself with it during her mental troubles ; the greater her sorrow the more she ate. Dr. Marshall Hall, under the name of “Temper Disease,” describes a species of monomaniacal pica ; it occurs in females who have impaired digestion, disorder of menstruation, and some morbid state of the complexion ; the women persist in starving, or will only take the most improper food, or, perhaps, only such as can be obtained by a sort of theft. The latter is occasionally seen in some cases of melancholia, where the patients refuse to eat or drink unless when left alone, and apparently unobserved. Nowhere have we better instances of pica than amongst the insane ; some devour quantities of grass and dandelions, or keenly relish a stray dahlia from the flower-pot ; others eat their own excrement or that of their neighbours, or prowl about every day to search for garbage in the sinks and waterclosets. A demented delighted to chew bits of old tobacco-pipe, blackened with use, mixing up the gritty mass with paper or tow, while a melancholic even now masticates with intense avidity strips of his clothes and every conceivable form of rag, with paper, tow, matting, and dried leaves—to make water, as he says, to quench his burning stomach. Some, hyæna-like, scrape at bones till they are polished with their teeth ; others devour the poultices that have been applied to their own sores or those of a companion. A patient in Murray’s Asylum with this tendency once had access to some recently cut laburnum wood, the bark of which he speedily tore off and swallowed, no doubt thinking it a very excellent morsel ; but in a short time he was attacked with severe vomiting, and suffered so much discomfort that he must be chary of again interfering with bark of any kind. A case of dementia at present under my care had a constant habit, during the earlier stages of his malady, of devouring rubbish of any kind, and especially coals. The latter had

\* ‘Nervous Diseases of Women,’ p. 257.

† Ben Jonson, ‘The Magnetic Lady,’ act i, sc. i.

to be carefully kept out of his way at all times, under lock and key, and the fire-places guarded. The case of a lunatic is recorded who imagined that his stomach required to be strengthened with iron, and lost no opportunity of swallowing this in any shape; after his death about 20 oz. of nails, &c., were found in his stomach.\* Sir B. Brodie relates that, during a paroxysm of insanity, a gentleman swallowed a pair of compasses, yet they were passed per anum about a fortnight afterwards, without a colicky pain.† A female inmate of an asylum snatched a case of lancets from the hand of the physician and swallowed it in a moment; no trace of the contents was found in the stools, nor when she died, many years afterwards, in the Perth District Asylum, was any appearance of such discovered at the post-mortem examination. Other patients, again, though they do not eat strange kinds of food, yet treat their ordinary diet in such a manner as to excite repugnance and disgust. A lady had the custom of putting slices of beef between her leg and stocking, carrying it there next her skin day after day, and then devouring it when almost putrid. Such a vulturine propensity reminds one of the habits of the turkey-buzzard of the United States. Idiot boys will devour numbers of the common earthworm, and one, mentioned by the good Gilbert White, was quite a bee-eater, remaining during winter in a kind of torpid state in the chimney corner, but in summer hunting all day long for honey-bees, humble-bees, and wasps.‡ Amongst the lower animals a species of pica often occurs. Cows, when grazing, cannot pass a bit of leather without chewing it with avidity, even to nigh choking themselves; and when observed, they run, pertinaciously chewing, until a handful of sand or other disagreeable substance is put into their mouths. Though not pure examples of pica, since some of the substances may have been taken to aid digestion, the instances of ostriches in confinement afford interesting cases of strange alimentary desires. One, a female, lately died at Lyons, having in its gizzard three tobacco-pipes perfectly intact, a knife, with a copper handle two decimètres long, and twenty-five brass buttons belonging to different corps of infantry; a half-franc piece quite intact; thirty-two sou pieces, having the effigies more or less effaced; fifty other pieces of copper, worn away to mere spangles of a triangular form; the remains of watch chains, various other metallic objects, six large walnuts, and several pieces of a hawthorn walking-stick. Besides, a piece of iron wire had traversed the stomach, and was found encysted in the abdominal walls, without inflicting any apparent injury on the bird.§ That these were not swallowed of necessity, the fact of there being a large number of stones and pebbles in addition sufficiently testifies.

\* Winslow, 'Obscure Diseases,' p. 652.

† 'Lond. and Edin. Monthly Jour.', March, 1844.

‡ 'Nat. Hist. of Selborne,' p. 211.

§ 'Med. Times and Gazette,' July 5, 1862.

In *Bulimia* the patient has an irresistible longing for food of a normal kind, so that an exaggerated form of gluttony results. This may occur, first, when the stomach is enlarged; and secondly, when it is of a normal size. Under either condition the person devours an enormous quantity at each meal, as much, indeed, as would suffice for three or four ordinary men, and yet he may be haggard and gaunt in the extreme. Amongst the insane bulimia is common; some, having devoured their own ample allowance, seize upon all they can lay hands on, prowling about the entire day in search of food. One obtained access to a pantry just after his dinner, and swallowed a quantity of pastry and fruit from several large tarts—grasping at them with his hands, several pots of jelly, and other edibles, before he was arrested. In the course of general paralysis the appetite is often very great, probably arising from some change in the gastric branches of the vagus. The condition of the blood, as after severe diseases, also causes a great craving for food. A case is related by Messrs. Griffins\* in which a hysterical female, while under a fit, devoured an enormous quantity of beer, broth, slops, wine, and ordinary food. In the lower animals the appetite for food is often so great as to cause the death of the creature, and therefore the act must be styled “*morbid*.” Young salmon, when liberally fed in an artificial pond with small flies, will so gorge themselves that many will be found dead in a few hours.

*Cannibalism*, a common occurrence amongst savages, occasionally happens as a morbid and irresistible desire in civilised countries. Under this head are classed all those instances in which the individual devours, or has an irresistible longing to devour, his own species. Langius relates the case of a woman who lived near Cologne, who had such a bulimious desire for the flesh of her husband that she killed him, ate as much of him as she could while fresh, and pickled the remainder, that she might enjoy herself now and then with a tit-bit. Schenk narrates the history of a pregnant female in whom the sight of the bare arm of a baker excited so inexplicable a desire to bite and devour it that she compelled her husband to offer money to the baker to allow her only a bite or two from the member. Elizabeth of Milan allured boys by her caresses, killed them, and ate their pickled flesh every day. A Scotch girl, the daughter of an anthropophagous robber, had the same wicked desires as her father, and, although long separated from him and educated apart, she still, from an innate depraved disposition, remained prone to the same crime. A cannibal of Berg (Westphalia), of a depraved disposition, did not hesitate to slay innocent persons, viz., a girl and a traveller, to indulge his morbid appetite.† When

\* Laycock, ‘Nerv. Diseases of Women,’ p. 254.

† Prochaska (Unzer and P. on the Nerv. Syst.), translated for the Syden. Soc. by Dr. Laycock.

civilised men are put to great straits by hunger, and when, therefore, the circulating fluid is in a morbid condition, we find cannibalism, generally so repugnant, resorted to with more or less ferocity.\* In the lower animals this morbid devouring of each other is seen in wolves, who frequently eat their wounded companions; in sows and cats, which occasionally swallow their young; and an attempt at the same is not uncommon amongst rabbits. I have in my museum a preparation of a large eel which met its fate in endeavouring to swallow a fellow-eel not much shorter than itself. It had seized the victim by the head, and commenced to swallow, but the tail of the latter (which had also entered the mouth) slipped in the struggle through the gill slit, and impacted the animal firmly in the mouth and throat of the plunderer, so that it came to the brink of the stream in an exhausted condition, and was captured with its prey *in situ*. A pike that has grown bold by swallowing water-hens and ducklings occasionally gets a harder bolus than it calculates on in attempting to swallow a brother pike, a fact sufficiently evident when it is found dead on the border of the loch with the victim in its throat.

*Dipsomania*, or *Oinomania*,† may be classed in proximity to bulimia, signifying in its true sense a disordered cerebral condition in which the individual madly drinks to excess, yet may loathe the degrading stimulant. It must be carefully distinguished from that condition termed drunkenness, in which “a man drinks at all times and at all hours from excessive liking, or drinks at convenient seasons as regards notoriety,” and “whose (vicious) self-indulgence would break out in some other form if there were no such thing as alcohol in creation.”‡ It sometimes originates in youth or extreme old age, where no preliminary indulgence had converted a habit into a disease. Professor Christison states, in regard to this form of intemperance, that no medical man of consideration doubts that he has to deal with a form of insanity which, originating as a physical impulse, unrestrained by the moral powers, becomes just a mental furosy, and, eventually, also a fatuity. He lays down, “as a practical rule for both lawyer and physician, that when in a particular case the avidity for strong liquors has reached such a height as—(1) to cease to be controllable by every plain and powerful moral and religious consideration, (2) to overwhelm the mind in frequent or continued intoxication, and (3) to occasion danger or actual damage to one’s affairs or family, or both—it ought to be regarded as a disease, and treated as an insanity.” He sees no difficulty as to “nice” distinctions in regard to “intemperance the disease, and the vice intemperance;” but, on the contrary, avers that only good will

\* See a very valuable paper on this subject by Professor Laycock, ‘Jour. Psychol. Med.,’ April, 1855.

† The Rev. W. McIlwaine, in the ‘Journal of Ment. Sci.’ for January, 1862, calls it *Œnomania* or *Methyskomania*.

‡ Bucknill, ‘Jour. of Ment. Sci.,’ July, 1861.

result from a strict application of the practice. The author of an admirable review,\* entitled ‘Inveterate Drunkenness not Insanity,’ holds that in no case does the inveterate drinker labour under an impulse, since at no time is the will so much in abeyance. He evidently considers, with Dugald Stewart,† that “madness seems in many cases to arise entirely from the suspension of the influence of the will over the succession of our thoughts,” and does not refer to the existence of a *perverted will*.‡ Most physicians are satisfied that there undoubtedly exists a morbid impulse to drink, just as there exists a morbid impulse to self-destruction, in both of which, be the “will” either “strong” or in abeyance, the individual is utterly incapable of staying the morbid appetite and perverted instinct. The reflex function of the cerebrum, excited by a peculiar state of the stomach and intestinal canal generally, may so influence the conduct and character of the drinker as to make him totally irresponsible, and why not insane? At any rate, there is no doubt that the condition, of an inveterate drinker is so marked that, if asylums have been held out as the havens of safety in such cases, the spirit which prompted it was not illiberal, since there were (and even now there scarcely are) no proper places devoted specially to the treatment of such patients. Inveterate drinkers, every one connected with asylum life knows, soon fret and become restive at the discipline and virtue they have forced on them in such confinement; but it is not uncommon that those who make the loudest complaints have most need to be kept, since fresh troubles await them instantly on dismissal.

Like other impulses, that to drink may be developed suddenly, hurrying its victim, in opposition to his best interests and present wishes, into scenes of degradation which he detests. In the facile and vigorous words of Commissioner Browne, “It arises without premeditation, whatever be the engagement of the mind; it in a moment prostrates and paralyses the most firm resolves, the most virtuous motives, the most colossal obstacles of reputation and interest, and plunges its slave into an abyss of drunken delirium.” In very few cases do we find this disease unconnected with an hereditary taint or an evident moral lesion. It may also occur from grief, misfortune, disease of the heart, liver, and stomach, or, in females, at the turn of life.

Authors have divided the disease into—I. *The acute*, when, for instance, an individual being placed in a new sphere of duty, or

\* ‘Med.-Chir. Review,’ April, 1862.

† ‘Philos. of the Human Mind,’ Part I, p. 78.

‡ If structural lesion occurs in any of these cases of affection of the *will* or *volition*, we shall find it in the pons Varolii and cerebrum, according to Gerdy, Mueller, Lorget, and others; Brown-Séquard, however, localises it in the thalami optici and corpora striata. ‘Lectures on the Physiol. and Pathol. of the Nerv. Syst.,’ p. 228.

under great temptations of any kind, or suffering from calamity, disease, or other agency, madly drinks who never drank before, and plunges at once into the wildest excesses. Cases of this kind are generally curable enough by careful and judicious treatment, without subjecting the patient to confinement. In one example, however, which came under my notice, the patient, a quiet, steady man, who keenly felt the degradation into which the uncontrollable impulse had thrown him, became a confirmed melancholic, with fixed delusions as to the injury permanently inflicted on his body by this one outburst.

*II. The periodic or recurrent.*—This is often connected, in the female, with uterine or ovarian disorders; from injury to the brain or its coverings; and hereditary influence in the other examples is generally noticeable. Suffering under this disease, a man may take a heavy drinking fit, and be for a week or two in a state of continuous intoxication, and this may be repeated again and again, while, in the intervals, he returns to his duties as before. It is related that a merchant of capital always got into a state of delirious intoxication from autumn to spring, but was most exemplary during the rest of the year; he was cured by being sent to the warmer climate of Italy during the winter. Another person, a music-master, is said to have abruptly quitted his studies every year to abandon himself to excessive drinking. He was at these times in a state of protracted intoxication, lasting for three or four months, until the disease disappeared, as it were, suddenly. Then he became averse to every excess, drank nothing but water, and avoided with extreme care everything that might compromise his health and dignity. In one of these periods of lucidity, feeling the approach of his malady, he killed himself. Some years ago I saw a Scotch gentleman who came every year from Russia (where he held a government appointment, and was in favour with the czar) to Scotland for some months. Throughout the whole of this period he was perpetually drunk, and apparently much more insane than most of the occupants of our asylums; yet in Russia, for the rest of the year, he conducted himself in a most exemplary manner, evincing the utmost devotion to his arduous duties, and fulfilling all his responsibilities with credit.

*III. Chronic.*—This is the most frequent, troublesome, and least curable form of the disease. If carefully investigated, hereditary predisposition will rarely be found wanting, and other evidences of moral insanity or brain disease often occur. Many patients, if neglected, gradually get worse, never better, and soon terminate their existence, or make their lives burdensome to their friends and society. The writer in the ‘Med.-Chir. Review’ before noticed, after deducting all possible contingencies, calculates that the number of confirmed drunkards in Britain amounts to 38,000. There is no

doubt that a considerable number of these cases are examples of true morbid impulse, and the disease of the governing power is often shown in various other erratic or depraved actions. For instance, a lady, the mother of a large family, in whose pedigree insanity was distinctly traced, became a victim to the impulse. All outward forms of decency and neatness speedily merged into abject carelessness, notwithstanding the efforts of her husband and friends to arrest her supply and to limit the morbid propensity. Her womanly cunning was too much for them; and, though she never had money, yet by abstracting articles from her house she was always able to obtain her destroyer, even in the country, and thus she rushed on blindly till her speedy death. Not one of her large family was sane, in the strict sense of the word; one daughter had erotomania, the eldest son was incapable of any duty requiring the feeblest intellect, and had a tendency to dipsomania; the rest were imbeciles.\* Some of the cases of dipsomania which come to asylums are by no means in a dubious condition as regards insanity. To think that one is capable of taking care of himself who from the early age of fifteen has displayed the impulse, combined with other evident mental lesions, is too great a stretch of fancy; who disgraced himself when an officer in India, assaulted his aged father, strove violently to enter the dwellings of his friends, lived in low society, and altogether was unfit for any species of self-control. Yet it is not exceptional for such a person when under the discipline of an asylum, by his cunning, plausible promises, arguments, and restless anxiety to be free, to hoodwink the friends and an inexperienced medical officer into the belief that he is to be trusted. I have known such a case landed in the padded room of a workhouse immediately after dismissal. As before mentioned, however, these are most troublesome cases in asylums, and the ordinary inmates are subjected to much annoyance and agitation by their scheming and dissatisfaction; for this reason they are better elsewhere. Both the chronic and paroxysmal forms, again, may precede serious brain disease, and of which each it may not be so much a cause as a symptom.

In regard to treatment, Esquirol suggests that some bitter infusion might be given, in the periodic form, to satisfy the cravings of the disordered stomach. I have seen an inveterate drinker leave off his bad habits and remain a sober man by drinking daily quantities of a decoction of gentian, or water acidulated with sulphuric acid. Dr. Laycock advises the use of a nitrate of silver pill to remedy the deranged functions of the stomach. In Denmark an attempt has been made to cure dipsomania by surfeiting the patient, but the danger of serious, and even fatal consequences from this novel procedure at once annuls its application. In the chronic

\* A very interesting case is given by Dr. W. T. Gairdner in his 'Clinical Medicine,' p. 284 et seq.

condition all alienists agree that it can only be treated by prolonged and complete abstinence from stimuli. It may seem too authoritative to seize a drunken man and deprive him of liberty for an indefinite period, but it is assuredly the only proper course in a true case of dipsomania. He should be confined in some institution until he is pronounced by the medical officer, after trial, to be again capable of self-control. The placing of the patient under temptation, while still under the authority of the governing institution, is a laudable means of testing the state of his power of resisting the impulse. Dr. Skae, of the Edinburgh Asylum, has done so for some years, and many others, I believe, follow a similar practice. Dipsomaniacs, when in asylums, frequently complain of "this being no place" for them, to wit, in a lunatic hospital, and amongst the insane; yet this is more assumed than real, for we cannot suppose that those who are at home in low society outside, and whose conduct is more or less degraded, will feel the company of the inmates unbearable, or be injuriously influenced by their contact, further than the prejudices of their friends imagine. At any rate, all these objections would be obviated by erecting hospitals entirely for the treatment of dipsomaniacs. A house of this kind has already been in working order for some years in Skye, and another near Stirling, while the Edinburgh House of Refuge, near Holyrood, takes in a number of immoderate drinkers of both sexes, generally of the inferior orders of society. At Binghamton, in New York, a large edifice has been erected solely for this purpose. Whatever be the place of confinement, treatment is undoubtedly necessary for a more or less prolonged period. Dr. Skae suggested a very good arrangement of the kind several years ago in a paper read before the Medico-Chirurgical Society of Edinburgh. Professor Christison\* advises, in regard to Scotland, that it ought to be lawful for the nearest relatives of such, under the certificates of two medical men and a sheriff's warrant, to send the patient to an institution specially devoted to dipsomaniacs. Further, he adds, that these institutions should be licensed by the sheriffs of the county, and visited by them and the Lunacy Commissioners; that no one should be detained for less than six months, unless for special reasons, or for the purpose of removing him to an asylum. It is not necessary that the patient be deprived of the management of his affairs, though that may be done in the usual way. Some such method as this is urgently called for in dealing with the impulsive or really insane drinker, as well as the ordinary drunkard, and the above-mentioned paper is a most dispassionate and trustworthy solution of the difficulty.†

\* 'Medico-Legal Relat. of Intemp.'

† Vide a paper "On the Desirableness of some Legalised Arrangements for the Care and Treatment of Dipsomaniacs," by Dr. A. Peddie, read before the Med.-Chir. Soc. of Edinburgh. 'Edin. Med. Jour.,' Feb. 1858.

Under the same head may be included the desire for stimulants or narcotics of any kind, as opium—of which we have a memorable example in the case of S. T. Coleridge—hachish, nabee, &c. Every tie yields before the impulse; and, when deprived of the usual drugs, red lavender, lavender-water, eau de Cologne, creosote, vinegar, vitriol and tobacco, are gulped down by the disordered stomach.

## II. *Impulses of the Sexual Instincts.*

The sexual instinct is a remarkable one, and in itself may be quite independent of cerebral influence, since it may be excited as a nerve action by external impressions only. Unzer\* states that “crickets allure to sexual congress, after decapitation, by the vibration of their wings; and Redi, Bibiena, and others, have observed that butterflies, after having copulated but once in their lives, repeat the function perfectly when decapitated, and the females, after sexual congress, deposit their eggs as carefully as if excited thereto by their instinct.” The same author observes, that when an animal is conscious of the immediate object of the instinct, namely, pleasure in sexual congress, the blind instinct is combined in its action with the sensational will of the animal, and becomes the instinctive passion of *physical love*. Other conceptions, desires, instincts, and passions, are brought to bear upon the object of the sensational volition of the animal, so that the fulfilment of the instinct may be attained. “As a pure instinct, there is no knowledge of its object and intent; so that even man, so long as it does not attain to be an instinctive pssion, does not know how to investigate the origin of his enchantment and mental disorder. He never imagines that the strange disquiet which thrills through his whole frame is sexual congress; and amidst the effort he literally does not know what he wishes, until the blind instinct becomes an emotional instinct and opens his eyes. If amourousness were a primary passion it would not be accompanied by the natural impulse; it would be a sensational desire for sexual congress, more volitional, never found in animals, although sometimes in man.”†

The instinctive sexual passion thus explained is subject to various disorders, of which the first to be considered is *Exaltation*. This gives rise to Erotomania, a morbid sentiment of love for some known or unknown object, and gratified by whatever means the patients can most readily avail themselves. Dr. D. H. Tuke states that erotomania proper is to nymphomania and satyriasis what chaste and honorable affections are to the most frightful libertinism. In this, as well as in the subsequent varieties, disease of the cerebellum has been sug-

\* Op. cit., p. 287.

† Unzer, op. cit., p. 165.

gested by some as the chief cause ; and Sir W. Ellis observes that in a case he found the temperature over that region higher than that of any part of the body. It is most general in young persons of a lively and ardent imagination, who are led away by pleasure, indolent life, novel reading, and a voluptuous and effeminate education. As might be supposed, it is most common in the highly nervous female, where the whole system becomes excited by the sexual stimulus, as much as by opium or other nervine alterative. A similar condition is seen in the frog in the beginning of spring, when the state of the system resembles that produced by narcotic poisons or tetanus.\*

The disease appears sometimes to be hereditary, as in the case of two sisters, one of whom fell in love with Charles, King of France, and, gaining admittance to his presence, made a scene. Some time afterwards the same sentiment seized the other, and she, too, had to be sent to a Parisian asylum. Guislain also found hereditary taint in the cases which occurred in advanced age. It is produced, or at least frequently accompanied, by disorders of menstruation, ovarian disease, irritating matters in the rectum, and some skin diseases. The diagnosis is not always easy, but generally there is found to flit over the countenance of the patient an erotic expression not to be mistaken—the eyes sparkle, and the whole features suit the peculiar idea. Sometimes, however, it masks itself under a deceptive exterior. The patients are not irrational, but often sad and melancholic ; they lose appetite, and are said to become rapidly emaciated in the worst forms, and may even fall into erotic fever. Some state that it is liable to be confounded with chlorosis ; “ But the alienist must be attentive, he will see the countenance of such assume an animated appearance and become flushed, the pulse frequent and stronger in the presence of the object of the affections, or even on hearing their names pronounced.” It may even proceed so far as this—“ They become pale, the eyes sink in the sockets, and tears flow involuntarily ; the appetite is feeble and capricious, and the rest disturbed. Becoming worse and worse, irrational expressions and strange actions and death reveal the secret, which diffidence, fear of relatives, and imperfect education had made them conceal.” Guislain† notes that it occurs about once in every 150 admissions. It is found both in persons who have lived a chaste life as well as those who are given to debauchery. It is often connected with a special state of the sexual organs, and frequently occurs at the period of suppression of the menses. He states that he has seen this morbid condition of the utero-ovarian organs attended by a peculiar turgescence, to such an extent as to provoke an abundant secretion of colostrum in the mammary glands, as is observed in pregnant women and in animals at the rutting season.

\* Dr. Laycock, ‘ Nerv. Dis. on Women,’ p. 75.

† ‘ Leçons orales sur les Phrénopathies,’ vols. i and ii, p. 176.

The bodily condition of young women suffering from erotomania and nymphomania is often remarkable. Dr. Laycock mentions that in a case of the latter, related by Alibert, the hips, thighs, and legs of the patient, a young female, were surprisingly plump, while the chest and upper extremities were in a state of emaciation. The ovaria would seem to have some special action on the structures of the lumbar region. In regard to the season when these diseases are most prevalent, little extended information can be got. It may generally be noticed that the sexual odour of erotic patients is much exaggerated, especially at menstrual periods. Many have a constant habit of using large quantities of ordinary scent, or else solace themselves with mint, peppermint, lavender, rue, assafœtida, and even fresh pine cones.

Erotomania occurs also in advanced life, especially in women—“*Douces d'une forte constitution.*” Guislain observes that it is very curious to hear the conversation of these patients, to observe their affectations and their dress. “*Les doigts garnis de bagues, le corps couvert de brillantes étoffes, elles étaient dans leur intérieure une somptueux ameublement, dans l'espoir d'y attirer les hommes.* Veuves de plus souvent, grand'mères parfois, ces Messalines de soixante-dix ans, aux allures caduques, font la désolation de leur famille et en causent souvent la ruine par leurs dépenses frivoles.” In old people this disease generally passes into dementia.

It assumes curious and interesting forms in asylums, generally displayed by careful and studied toilets and bedeckings with supposed fineries; and, as usual, is best marked amongst the females. It is often manifested at the sight of any one of the opposite sex indiscriminately, when languishing glances, smiles, and unmistakable fondness are displayed. Or, again, they are more capricious, praising in exaggerated strains the goodness of, and their devotion to, the object of their affection; and they are versatile and flighty withal. So intense and engrossing does the ailment become in some instances, that the patient lapses into dementia, from excessive nervous exhaustion. One lady is never done talking of honorable marriage, and the husband she ought to have had if she had been permitted to remain outside, away from the parties that administer chloroform and ether to her. In her case there is hyperæsthesia of the emotions, and her impassioned entreaties, tears, and seizing of the hand betray the ardour of her attachment. Another openly beseeches the object of her attraction to marry her, and is never tired conversing with her companions about him, planning the most extraordinary means to assist her in accomplishing her end, and jealous of every slight attention paid to other than herself. She openly watches him on every available opportunity, and the same anxious form is seen peering from a window overlooking the exercise ground, where her fancied lover is. Her whole soul is wrapt in the

one all-powerful passion, yet she is for the most part candid, and not given to any secret abuse.

In *Nymphomania* and *Satyriasis* the symptoms are announced by a violent excitement of the sexual organs, the former occurring in the female, the latter in the male. Sometimes, indeed, the system becomes endowed with all the irritability observed in hydrophobia. Guislain states, “C'est de cette affection que sort l'hystéromanie, la fureur utérine proprement dite.”\* He cites a case from Esquirol in which a young woman was so overborne by the sexual passion on the marriage night that she became a complete maniac, characterised by intense desire for sexual congress, which she openly declared by her speech and gestures. Cases of nymphomania are very degraded and troublesome cases in asylums, and the patient frequently exposes herself in the presence of males unless suitable clothing is provided. Self abuse in both sexes is very apt to lead on to dementia. In the world at large such practices are by no means uncommon, and the general debility accompanying them affects most injuriously the brain and nervous system, in proportion to the susceptibility of the patient. In these we have a languid circulation, with a retiring disposition, disordered intestinal canal, and a general wasting, even although the appetite remains good or even voracious; and, sooner or later, the neglected disorder saps the mind into imbecility. It would seem that the cerebrum is weakened by the due supply of blood being withdrawn from it and forced into other parts of the body, and some say also from the cerebellum engrossing more than its share. When the latter is in any way highly excited venereal excesses, it is stated, are the result, and the preceding mode of gratification not infrequently resorted to. In asylums the demented patients practise masturbation openly, in any available corner, or at night. When practised in bed by a patient suffering under any other mental affection serious results may ensue to the general health if he is of weakly habit, and with an almost certain prospect of producing dementia of an aggravated form. The inexplicable breathlessness and discontent, the cold hands, general debility and restlessness of such are often the first effects observed, and the diagnosis is aided in many examples by the erotic speech. In one case under my care the secret masturbator was detected by an inflammation of one index finger, of

\* [My friend Dr. Lauder Lindsay, in a paper published in the November number of the ‘Edinburgh Med. Jour.’ for 1865, uses the term “hysteromania” to designate the emotional features of a case of “temporary insanity,” apparently unaware of the very different meaning in which authors have used this word. Vide Guislain, ‘Leçons Orales,’ tom. i, p. 179, &c. Thus does he (Dr. Lindsay), while denouncing the prolix nature of modern scientific nosologies, propagate a similar error to that he attacks on the next page, in support of a mere business classification of insanity (founded on observations deduced from asylum reports), and which in its simplicity leaves out moral insanity altogether!—November, 1865.]

unaccountable origin ; suspicion, however, was aroused, and the penis was found in a state of paraphymosis, requiring instant relief to prevent mischief. When the patient is powerful and muscular, excitement and general disorder frequently accompany the masturbation. It may be pursued in some demented cases to a great extent, without causing apparent difference in the general health. In the case of the females various means are used, such as a child's toy trumpet in the instance related by Dr. Bucknill,\* in others the finger or some kind of artificial penis. Such are very troublesome patients, and can scarcely be kept decent.

2. *Perversion*.—*Senile pruriency* sometimes clouds the failing days of a once virtuous man ; and it cannot always be accounted vice, but rather manifest insanity. Occasionally mere irritation of the sexual organs satiates the morbid instinct. Marriages of very old men with young and blooming women are in many cases manifestations of the same tendency. *Precocity*, or the occurrence of sexual impulses in childhood, is said to happen generally at two periods, viz., at the ages of three and seven. Dr. Laycock is of opinion that it may often be attributed to the practice which certain nurses have of irritating the genitals of children to make them sleep. The other forms, *Pederastia* and *Bestiality*, are degraded in the extreme. The latter often occurs in persons advanced in life, and may be developed in conjunction with exaggeration of the natural instinct, as in the case of an old man of seventy, who, having a wife and certain female acquaintances in addition, yet had criminal connection with the quadrupeds on his farm. The irresponsibility of such a patient is glaring, yet his case was entrusted entirely to the police. A very interesting example of the morbid development of the natural instinct is related by M. Bédor, of Troyes. A young man of twenty-seven years of age, an imbecile, with incipient goitre, was confined in the hospital of Troyes, after an attempt to violate a young girl in the presence of several persons. When residing in this hospital he entered the dead-house, when he knew a female had been taken there, and horribly profaned the dead body. He publicly boasted of these facts, the gravity of which he did not appear to understand. Measures were then taken to prevent all access to the dead-house ; but this imbecile, who in all things was completely destitute of intelligence, displayed in this case an instinctive cunning, which triumphed over all obstacles ; he stole a key of the dead-house, and was thus able for a time to indulge his unnatural propensities. He was at length found out, and sent to the asylum of Saint-Didier.†

*Treatment*.—In the higher forms all those methods of life and training calculated to promote moral control should be attended to ; if life is threatened, marriage may, but also may not, form an effectual

\* Appendix of cases to 'Psychol. Medicine,' by Bucknill and Tuke.

† 'Jour. of Pract. Med. and Surgery,' Paris, February, 1858.

remedy. A masturbator should not marry. A more rational attachment may be drawn on the patient, without exciting his suspicions, and all nervous excitement should be allayed by appropriate calmative measures. Amongst remedies are mentioned tepid baths, nitrate of potash, diluent drinks, warm hip-baths for females, especially where amenorrhœa exists, whey, ass's or goat's milk (?), succory or vegetable regimen. Antispasmodics, according to some, rather increase than diminish the flame. Tonics, good food, cold baths, diversions, journeys, exercise of all kinds, and manual employment, may also be added. In persistent instances removal to an asylum is necessary, and even there, as before mentioned, these cases are frequently troublesome. In the lower forms in asylums the cold douche to the loins is of much service, and careful night-nursing and attention ameliorate the tendency. The application of a small emplast. lyttæ to the penis will be found suitable for some cases. So intense does the morbid impulse occasionally become that the patient masturbates during sleep, a state of matters that cannot well be managed without resort to some means of restraint. The French have instruments for fastening the hands of such on going to bed, but probably the use of the cantharides would be sufficient in the majority.

### III. *Domestic.*

The domestic instinct has for its object the life of the mother and the care of the child.\* By excessive stimulation, or by any of the causes detailed previously, this instinct becomes perverted, and a father slays a wife or child, or both, and a mother her infant. In the lower animals instances of such perverted instinct occur in domestic rabbits, the females of which will kill and eat their own young if their nests are disturbed at a certain period. Sows occasionally do the same. Ignorance of the relationship in a few cases makes some carnivorous and piscivorous animals devour their own offspring; for instance, the salmon swallows unwittingly smolts and parr, which, perchance, were the produce of its own ova. Again, wholesale infanticide is practised by certain wasps at a particular season, yet on investigation we can scarcely call it a perversion, but rather a higher development of ordinary instinct. Wasps in general are so fond of their young that, even though their nests be broken in pieces, they will not abandon them, "yet, when the cold weather approaches, a melancholy change ensues, followed by a cruel catastrophe. As soon as the first sharp frost of October has been felt, the exterior of a wasp's nest becomes a perfect scene of horror. The old wasps drag out of the cells all the grubs, and unrelentingly

\* "Quid dicam quantus amor bestiarum sit in educandis custodiendisque iis, quæ procreaverint, usque ad eum finem, dum possint seipsa defendere!" Cicero, *De Nat. Deor.*

destroy them, strewing their dead carcasses around the floor of their now desolate habitation.”\* This apparent cruelty is caused by real fondness for their young, for the approaching cold weather paralyses the efforts of the parents, as well as cuts off the supply of food. The old wasps then choose rather to inflict a sudden and speedy death than suffer the young to perish slowly of hunger. In the higher animal, man, infanticide is the most common form of perverted domestic instinct, actuated sometimes by the most curious motives, though occasionally none can be observed. It is related that a lady of imagination the more ardent, in consequence of her having in very early life contracted the habit of novel reading, and excessively unhappy on account of the prolonged absence of her husband, desired to destroy her children, in order that they might not one day experience a like misfortune. Patients of this description often seek the asylum gates, as they are fully alive to their danger, and fear that they cannot longer control the terrible impulse. It would seem that in many of the cases (for they are not uncommon) there existed a hyperæsthetic state of a nervous condition, such as love of offspring, which led to actual disease, and, subsequently, total perversion of the instinct. Thus, the circumstances are totally different from those under which the criminal offence of infanticide takes place. For instance, a cook in a family was secretly confined of an illegitimate child, which she killed and hid in one of her trunks. Previous to the birth she carefully concealed her pregnancy, and obtained the loan of a razor from her father, for the assumed purpose of paring her corns, using this weapon to cut the throat of the child down to the vertebræ. It was argued in her defence that in cutting the cord, which was stated to have been coiled round the neck of the child, she had unwittingly cut its throat; but so deep a gash, which indented even the bone, could scarcely have been accidental, and by no means could the torn ends of the cord be brought to bear on the part cut. Such is very dissimilar from the following :†—A married woman, aged thirty-three, threw her child, an infant of twelve months, out of the window. The child was injured, but recovered. The mother had been formerly confined as a lunatic, and was subject to lunacy during pregnancy, a condition in which she then was. She was acquitted.‡

\* Kirby and Spence’s ‘Entomology,’ p. 211.

† ‘Med. Times and Gazette,’ August 9, 1862.

‡ Vide also ‘Jour. of Pract. Med. and Surgery,’ Paris, January, 1858, where a case is given of an excited female who endeavoured to throw her child into an oven to bake it. She was cured by drachm doses of sulphuric ether administered per anum.

#### IV. Personal.

The most important form under this head is *Suicidal Impulse*, which, however, at present I can only note and pass on.

*Self-mutilation*.—It is occasionally observed that some of the lower animals, especially amongst the voracious tribes, eat portions of their own bodies under certain circumstances. The naked-gilled molluscs are examples amongst marine animals. Kirby and Spence relate that an entomologist having directed the tail of a dragon-fly, which he had caught, to its mouth, to make an experiment as to whether the known voracity of the tribe would lead it to bite itself, saw, to his astonishment, that it actually bit off and ate the four terminal segments of its body, and then, by accident escaping, flew away as briskly as ever. The whole of the crustacea possess a wonderful power of self-mutilation ; but nature has likewise endowed them with a special provision whereby haemorrhage can be arrested, and an admirable means for the reproduction of the lost members. Under ordinary circumstances, however, such self-mutilations in the crustacea are intended for the safety of the animal, whereas in man, for the most part, they are essentially morbid. It is found that persons will occasionally castrate themselves, amputate their arms and legs by means of a passing railway train, cut, tear, and burn their bodies, and perform other impulsive acts of torture. Amongst the insane many marked cases are observed, not only in those whose sensibility is diminished, but where it is most acute. Under paroxysmal excitement many will strike and slap their faces with such vehemence that they are bruised and bleeding ; others will pick their fingers until they are almost desquamated, and the face sometimes fares little better. One woman had a remarkable propensity for decapillation ; and so effectually did she proceed that both sides of her head were rendered bald, while a ridge of strong hair, like a mane, ran along the middle line of the scalp. In examples of all these varieties the patients appeared to have ordinary sensibility. In general paralytics, again, the sensibility is frequently much blunted. One man slaps his hands with such force on his legs that the blood spurts from the ends of his fingers ; another deliberately gnaws the tips of his fingers, and tears at any ragged fragment that affords a hold ; while others, “ who have been operated on for hernia, have introduced their fingers into the wounds, and in the coolest manner amused themselves by pulling out their intestines, as if they were manœuvring on a dead body.”\* The insane will also burn their feet, arms, and hands, in the fire, or thrust them into hot water ; and such cases are not always accompanied by impaired sensibility.

*Panphobia*.—Impulsive terror is seen occasionally in some of the

\* Winslow, op. cit.

lower animals, as in horses and the Ca'ing whales. In the human subject the patients will leap out of windows, scramble over roofs, avoid and shrink from their nearest relatives ; in short, there exists nothing which does not intimidate them. Commissioner Browne says, "The source of suffering resides in external circumstances, or in the unjustifiable and unmerited machinations of others. The object of terror may be imaginary, or real with imaginary attributes ; it may be innocent or threatening ; it may appeal to the superstition or selfishness of the individual, and be a spectre or a murderer. Persons so affected are pale, haggard, or emaciated. They seek protection in corners, in bed, in light, or in darkness, solitude, or society, according to their prevailing delusions." In certain physical diseases this impulsive terror manifests itself, as in blood-poisons, *e.g.* fevers and delirium tremens. The patients sometimes commit suicide, or, rather, are accidentally killed when endeavouring to escape from the fancied terrors. In an asylum a night-watch in the sleeping apartments of panphobic patients is of much service, restoring their confidence, and, it may be, dispelling their illusions. Just as in the mist a crow may be mistaken for a man, so, in the dark, illusions of the imagination are much more liable to be mistaken for realities than when their momentary effects on the belief are continually checked and corrected by the objects which the light of day presents to our perceptions." The presence of an attendant at night in such cases is all the more necessary, as this state very readily ensues after sleep, even when not present at other times.

*Wandering, or the impulse to vagabondise*, is a form which seems to spring from the appetite for open-air life, so inherent in the constitution of man. In the normal state this is shown in a great variety of ways, as by the love of flowers, by delight in poetry which describes natural scenery, or by the love of landscape painting. "It is probably not infrequently due (in town-bred people) to the re-excitement of ancestral substrata, for it is sometimes manifested in the children of townspeople with considerable intensity. Some such state is also developed even in well-bred persons, who, seized with the mania of vagabondage, abandon all the comforts of town and civilised life to wander freely in the woods and over the prairie."<sup>†</sup> The tendency to wander is a frequent manifestation in the insane, and which even in the "free colony of Gheel" compels the use of anklets and leg-straps. The patients wander hither and thither without any definite purpose, and in this condition, bereft alike of friend and history, they find their way, through the authorities, into our public asylums. At the outset of brain disease this tendency to wander is often conspicuous, and as much if not more than any other symptom compels the friends to find shelter for the aliens in

\* Stewart, 'Philos. of the Human Mind,' p. 80.

† Prof. Laycock, 'Mind and Brain,' vol. ii, pp. 288-9.

an asylum. They will stroll from their homes and wander through the woods by day and night, and may be found in some distant spot, stretched on the ground in contemplation of the moon and stars, wrapt in the forgetfulness of their own errant ideas.

### V. Social.

*Homicidal Impulse* and *Pyromania* fall in here, and also *Lycanthropia* (wolf-like madness). The latter generally consists of a mixture of several—erotomania, homicidal impulse, and some of the alimentary forms. In former times it would appear that this disease was more frequent than now, and it was believed that the miserable patient made a compact with Satan, and was presented with an ointment which, when rubbed on the skin, endowed it with hair, and transformed the whole body into a wolf-like aspect! “Subsequently these miserable creatures did commit murders, or in the deep reverie which accompanied some cases, and the excitement which must have attended them all, they imagined that they had committed murders, and devoured the flesh of their victims. They were further impressed with the belief that they traversed mountains and forests as beasts of prey, running down and eating indiscriminately animals and children; and the state of the palms of the hands and nails proved that some of those afflicted had actually simulated the mode of progression of quadrupeds.”\* Like some of the other varieties of morbid impulse, it is stated to have assumed an epidemic form, and was prevalent in the mountainous and sterile region of the Jura in 1598. A remarkable instance of this kind occurred in the case of Bertrand, the French “vampire,” where the young sergeant of the line haunted newly made graves at midnight, tore up and violated the bodies of many females, at the same time cutting and mutilating them. Another case is related of a man who murdered a young girl at the edge of a wood, violated her body, mutilated the thorax and sexual organs, sucked her blood, and ate portions of her flesh. When brought to trial he felt sorry when he saw the mother of the girl in tears. In this case, also, the impulsive lunatic was a soldier. The ancient lycanthropia has almost disappeared, except an occasional modification in the shape of a patient who thinks that he is a dog, and acts like one, attempting to bite, &c.†

\* Commissioner Browne, in ‘Repts. Crichton Instit.’ I may here acknowledge the great interest, information, and pleasure which the perusal of these effusions gave me in 1860 (an opportunity for which I am indebted to the kindness of Dr. Lauder Lindsay). Though I am very far from thinking that nowadays an asylum report is the proper place for medical disquisitions, of whatever kind, it must be recollect that times were then very different.

† Tincture of Lobelia inflata, as recommended by Dr. Baudelocque, is a useful sedative in such cases.

VI. *General Instincts.*

Of these, *Pilfering*, or *Kleptomania*, is the most important, and an able résumé of the subject has been lately given by Dr. Bucknill in this Journal.\* *Accumulating*, a phase of this perverted instinct, is not uncommon amongst the insane, and the subsequent remarks thereon will be confined to this class. Some patients collect straws, sticks, and pebbles, arranging them perpetually in an ever-varying series of squares and geometric figures; an analogous condition to the acts of the playground bird of Australia, just as kleptomania finds its analogue in the motiveless thefts of the pie tribe. These patients carry about in their clothes great quantities of rags, twigs, pebbles, flowers, bread and cheese, and never seem contented except when adding to their store. Others will amuse themselves by collecting stones and pebbles all day long, until they are scarce able to move with their load, when they will suddenly free themselves by scattering, and commence to hoard anew. They are commonly good humoured, restless, and generally cases of dementia; and sometimes this tendency is associated with a propensity to draw squares, circles, and geometrical figures on the airing-court gravel, either with the heel or a sharp stone. When their stock is examined by the physician they generally take it in good part, but the interference of a fellow-accumulator meets with summary vengeance. If such patients are allowed the freedom of their own apartments, extraordinary collections of diverse materials are accumulated. I shall not readily forget the turning out of such a room after about thirty years' repose, on which occasion almost every article in domestic or other use was represented, from rags to cricket-net poles. This patient combined with his tendency to accumulate the most exquisite taste for drawing geometric figures on paper, chiefly with a bow-pen. Nothing could surpass the beauty and elaborate finish of his skilful productions. A quaint case of dementia, at one time under my care, had pockets constructed in all portions of her dress, even to the having of one in each wristlet. In addition, she possessed a muff, also furnished with pockets, pendant beneath her gown. In these receptacles were stored every article which attracted her fancy or cupidity, and the number was often very great. In this instance, and in several others, there would seem to be a certain amount of forethought, even although the impulse be irresistible, since provision is made for the reception of the plundered articles.

*Chicanery*, an irresistible tendency to cheat and lie, occasionally

\* 'Jour. of Ment. Science,' July, 1862.

meets the alienist both beyond and within the asylum walls. In the former case the patients are the source of much annoyance and grief to their friends, who are often distracted at the seeming depravity, as well as frequently made the dupes of their tendencies. Hysterical young girls, at and subsequent to the period of puberty, afford the most remarkable instances of this disease. Such a patient will assert that she can live without food, and obtain all her nourishment by stealth; "or she has retention or partial suppression of urine for a long period; her attendants seem very sceptical, for she looks fat and well; and so she crams her vagina with stones, and drops them into the chamber-pot, to make people believe that she has stone in the bladder."\* Such persons will simulate all manner of diseases, vomit lizards, feign epilepsy, diseases of the joints, &c. Examples occasionally occur, independently of hysteria, where mendacity is the rule, truth the exception. Amongst the insane some interesting cases occur in dementia, chronic mania, and Adonis mania. In every account of ordinary affairs, especially to strangers, they seem impelled to falsify and "draw the long bow." It is not rare for certain patients to simulate epileptic fits when checked for misconduct; to feign sickness, and frame notorious lies, in order to obtain stimulants, to excite sympathy, or without evident cause. "As the propensity is part of the disease, its indulgence will follow as necessarily as convulsions follow any sufficient excitement."† It may be the best way, in some cases, where there is no other mental lesion, quietly to let the patient deceive us, and make the gratification of the impulse subservient to the remedial treatment.

*Low society.*—In this somewhat rare form persons of good standing forsake their friends, and seek companions in the lowest dens of depravity. They sleep, eat, and live with their strange associates; but they are not necessarily drunkards, though they may treat all till their means are exhausted. After spending some time thus they are suddenly seized with a desire to return to their relations, and they do so, perhaps not manifesting the like tendency for a long period. In cases where other evident moral lesion is present, this is frequently a very conspicuous feature. Such patients seem ill at ease in the society in which they have been accustomed to move, and seek the more congenial company of attendants, servants, or loose characters of the same sex, and with them only do they seem happy. This is occasionally observed as a trait in the character of the insane.

*Abusive and indecent language.*—Ministers have been compelled to forsake the pulpit, from their experiencing in their declamations an irresistible desire to use blasphemous language. A lady, it is stated, while repeating the Lord's Prayer, suffered much mental

\* Dr. Laycock, 'Nerv. Dis. on Women,' p. 353.

† Id., op. cit., p. 254.

anguish on account of an ungovernable impulse she had to say "Our Father who art in hell." "I have known patients alternately spit, coax, bite, caress, beat, kiss, vilify, and praise those near them; and to utter one moment sentiments that would do honour to the most orthodox of divines, and immediately afterwards use language only expected to proceed from the mouths of the most depraved of human beings. It is often unassociated with any form of delusion, hallucination, or illusion." Other instances show that such tendencies are the precursors of serious brain disease. Spurgeon relates that at an early part of his career he was obliged to put his hand to his mouth to stay the utterance of blasphemous expressions. In asylum life examples are numerous enough, associated, however, with other mental disease. The same extravagant, indecent, or abusive expressions will be used for years with remarkable monotony and volubility; so that one accustomed to the patient will be able to predict what is to follow after the first few words are uttered.

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*Recent Metaphysics.\** By HENRY MAUDSLEY, M.D. Lond.,  
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As it appears that man is created in the image of the ape, it cannot but be counted creditable to him that he strives so perseveringly to transcend his apehood.† Certainly, Transcendentalists, who, like Mr. Disraeli, are "on the side of the angels," are not willing to acknowledge their humble parentage; but Transcendentalists like Mr. Disraeli are men of mystery, and not indisposed, consciously or unconsciously, to ingenious tricks of conjuring: one cannot always be sure whether they are acting or are in earnest. To those who do know themselves to be idealised monkeys it must be a matter

\* (1.) 'An Examination of Sir William Hamilton's Philosophy, and of the principal Philosophical Questions discussed in his Writings,' by John Stuart Mill, pp. 561. Longmans and Co., 1865. (2.) 'Recent British Philosophy: a Review, with Criticisms,' by David Masson, pp. 414. Macmillan and Co., 1865.

† "If man was made in the image of God, he was also made in the image of an ape. The framework of the body of him who has weighed the stars and made the lightning his slave approaches to that of a speechless brute, who wanders in the forests of Sumatra. Thus standing on the frontier land between animal and angelic natures, what wonder that he should partake of both?"—Hallam, 'Int. to Hist. of Europe,' vol. iv.

of great satisfaction to feel how strongly the developmental *nusus* of nature displays itself in them ; *this* they cannot but allow, however much averse from any concealment of their lowly origin. Now, the great problem of philosophy has been from time immemorial, and still is, to determine what *names* shall be given to those relics of the angelic nature which a man is supposed by one side to have, or to those laws by which the developmental *nusus* takes effect in him, as the other side thinks. What this fundamental potentiality by which man is enabled to develope into an intelligent being, when he does not happen to become a lunatic or an idiot, shall be *called*—that is the mighty problem which has exercised, and exercised in vain, the highest intellects for more than two thousand years. Assuredly, here, “what was a question once is a question still, and instead of being resolved by discussion is only fixed and fed.” On the whole, philosophical mankind may be roughly divided into three classes :

1. There are the Transcendentalists, who hold that they come into the world from afar, “not in entire forgetfulness, and not in utter nakedness,” but “trailing clouds of glory” in the shape of primary intuitions. By these they are enabled to impose upon the rough material of experience such forms as impart to certain mental products the characters of universality and necessity. They think to transcend the phenomenal and to know the absolute. O day and night, but this is wondrous strange ! “What surmounts the reach of human sense,” we may, after the example of the angel in ‘Paradise Lost’ expounding heavenly mysteries to Adam, so delineate “by likening unknown to known,” as may express it best. Conceive, then, a metaphysically minded oyster, no longer content to vegetate in placid lubricity, but zealous to discover the whence, how, and whither of its existence. What knowledge of, or what belief in, the nature of man’s life the aspiring oyster may be conceived to have, or to have not, is such as the Transcendentalist has, or has not, of the absolute ; to the oyster, as to the man, the absolute is that which surmounts the reach of its senses, that with which it is not brought into any relation by its existing sentiency, that which to it is unknown therefore and unknowable. Now, the absolute of the oyster is the relative of man, forasmuch as he has far wider, more numerous, and complex relations with nature ; but we have only to suppose an additional special sense conferred upon him, and the whole aspect of the universe, together with his fundamental intuitions concerning it, would be wonderfully changed. The new revelations of science testify new developments of existing human sense : what then would be the result of a new kind of sense ? The world which we have experience of or know, compared with the world of actual existence, may well be as the world within the oyster’s shell is as compared with the world known to man. Admitting then with the Transcendentalists, the vast unknowable, may we not in turn claim from them an ad-

mission of the provisional nature of their so-called fundamental intuitions or beliefs?

2. There are the ruthless Empirics, who look back lovingly through the ages to their remote simian fore-elders. These are they who are steadily creeping onwards to a higher stratum of being, and who by their own labours are gradually acquiring and determining forms of thought that shall be inherited or predetermined in the constitution of those who are to come after them. Heirs of but little, they hope to leave their successors heirs of much. They alone have any real foothold in positive science, for they alone offer any scientific hypothesis with regard to man's origin upon earth. The grounds on which they rest their hypothesis are certainly not baseless: if the brain is the organ of the mind, as no one qualified to form an opinion on this subject now doubts; and if with the increase of intelligence there is a corresponding increase in the development of the brain, and with a deficiency of intelligence an observable deficiency in the development of the brain, as scientific research has clearly shown;—then when we find that the brain of the earliest races of men were of inferior development to most of those which now exist upon earth, and are fairly comparable to the brains of the lowest existing savages, we cannot but conclude that the early inhabitants of the earth were much nearer the apes than we are. The differences, indeed, between the brains of the lowest savage and of the European are undoubtedly of the same order as, though less in degree than, those which exist between the brain of the highest ape and that of the lowest savage. In the long series of the manifold productions of her creative art Nature has made no violent leap, but has passed through gradations almost insensible from one species of animal to another, and from the highest ape to the lowest man: such is the creed of the ruthlessly logical Empirics. Accordingly, by them the so-called primary intuitions of Transcendentalism are no longer admitted to be *intuitions* or intuitive truths; they prefer to call them necessary forms of thought or laws of development of the mental organization. Assuredly, to speak of an intuition being innate or primary in the sense of being contemporaneous with birth is no less absurd than it would be to speak of an innate pregnancy; but if all that is meant by such language is that a properly constituted being under due conditions of development will necessarily have certain ideas—as, for example, that two and two make four—then every generic act of human development, physical or mental, is just as much innate. Of writing of books upon this great question, however, there has been no end, nor does there appear likely soon to be an end.

3. This third class may comprehensively include all those who do not belong to either of the two former classes. The varieties of it are too many for enumeration. There are the sceptical or cynical

beings who think it unnecessary to believe anything with any particular earnestness, and who, with an air of superiority, laugh at the serious way in which those not of their fraternity take the great puppet-pageant of human life. They wonder why others cannot be content, like them, to rest quiet in the comfortable indolence of a general scepticism, and, instead of so persistently wooing divine philosophy, to accept the embraces of the divinity only when it comes to them, as it did to Danae, in a shower of gold. Holding that men deceive, that they are deceived, and that all in the world is a delusion, they suspect that any one who takes things in earnest has either a defective liver or a softening brain. Meanwhile, they are sometimes a little mad themselves; or, at any rate, it is necessary to call them so unless we admit that they constitute the sane minority, while all the rest of the world is mad. Most of them do not fail, however, to exhibit considerable method in their madness; though making no account of philosophical inquiries, they take good care to act well their part in life, so as, when the play is over and the curtain falls, to go off the stage amidst great applause. Truly, they are consummate actors, and they know how much to speculate upon the stupidity of mankind.

Another clique of philosophers, of whom we make little account, though they make mighty account of themselves, is that of the *Empirical Psychologists*, or the *Illogical Empirics*. These are they who believe that by observing and reflecting upon the phenomena of self-consciousness they can evolve a philosophy of mind that shall not be vague, obscure, and suicidal, like Transcendentalism; nor shall demand the long, patient, and uninviting researches of true Empiricism.\* By putting his own consciousness to the torture, a man may make it confess anything which he desires it to say; and, accordingly, there is no lack of philosophic material in this method. Its disciples, hybrid-like, are intermediate between the first two classes, and, like hybrids, they occupy an untenable position and are commonly infertile in the first or second generation. Like the humble argonauts, too, they have a habit of impregnating themselves.† When any opponent assaults their position with the battery of an unwavering logic, they are driven to take refuge in one or other of the classes from whose unnatural union they have sprung.

Thus much concerning the classes of philosophers at the present day. As a practical classification, the foregoing appears preferable to Mr. Masson's elaborate system; he sets up a number of very formidable names, and then goes about in a persistent and pon-

\* Because of the ill meaning commonly attached to this word, Mr. Mill proposes the term Experimentalism in his article on Comte in the 'Westminster Review.'

† The so-called hectocotylus of the argonaut has been discovered by some to be an apparatus which the creature has for impregnating itself.

derously systematic way to bring all philosophers under one or other of his labelled compartments. Now, we can very well imagine a philosopher objecting most strenuously to thus being bottled up as a dried specimen in any one of the compartments of his museum. "Confound your classification," we can conceive the angry subject of his examination exclaiming, "it is not a natural one; I am neither a *Materialist*, nor a *Materialistic Realist*, nor a *Dualistic Realist*, nor a *Natural Realist*, nor a *Pure Idealist*, nor a *Constructive Idealist*, nor any other artificial *ealist*; I deal not with learned names, that are expressive of nothing correspondent in nature, but with realities; and I protest most earnestly against being thrust into one of your drawers, whether I fit into it or not; or against being knocked on the head as a monstrosity, because I cannot be made to fit." We think that more than one of the philosophers whose system Mr. Masson has dissected has a good right of action against him for libel, or at any rate the right of a summons against him; whereas he, the said Mr. Masson, did, by calling him names—to wit, a *Cosmoothetic Idealist*—use towards him language provocative of a breach of the peace. Now, the virtue of the foregoing proposed classification is, that it does not deal with names or dried specimens of anatomy, but with realities, with living creatures, who cannot help falling under one or other of the comprehensive classes; and who, if they are not content in one, may easily run into the other.

Of the different species of philosophers, the Transcendentalists and the Psychologists have certainly been the most troublesome to mankind with their ever-recurring "sapless problems of metaphysics, fit only for scholastic uses." The celebrated problem of the race between Achilles and the tortoise is a good example of the sort of work on which they have been engaged: it was one of the arguments by which Zeno demonstrated the impossibility of motion. Suppose the tortoise to have a start of a thousand yards before Achilles, and Achilles to run one hundred times as fast, one might imagine that the swift-footed runner would soon overtake the tortoise. But not so: he cannot logically overtake it at all, though he run as he never ran when he ran away from Hector;\* for when he had run ten thousand yards, the tortoise would have run ten; when he had run those ten, the tortoise would have run one tenth of a yard; and as this sort of thing may go on *ad infinitum*, of course Achilles would never overtake the tortoise. Sir W. Hamilton pronounced this argument to be logically correct; and so of course it must be, and

\* Did he run away from Hector? Certainly, Homer does not mention the fact; but the probabilities in favour of it are—first, that if he had not, Hector would have slain him long before he slew Hector; and, secondly, that the true cause of his sulking in his tent was the loud laughter with which the Greeks greeted his fear-winged flight.

everything is nothing, and nothing is everything, and there is nothing new under the sun, and what is new is not true, and what is true is not new, and it is no matter. Under these circumstances, any one who does not see the fallacy in the argument, and cares to have it pointed out, may refer to Mr. Mill's admirable 'System of Logic,' where this will be found done in two lines; though Hobbes was, perhaps, the first to indicate the fallacy. This might well induce a reflection how useless it is to write for men who in thought are running on a different line of rails entirely; they do not read, or, if they do, they do not assimilate. Mr. J. S. Mill need not have written now much of what he has written if much of what Hobbes wrote long since had not been written in vain.

Metaphysicians have a pathological sympathy with one another, but they have no sort of sympathy with any thought that does not bear the impress of their morbid type. It is a remarkable, but perhaps righteous, Nemesis, that when men take to an unnatural taste of any kind it soon entrals them body and soul; it cuts them off completely from all sympathy with their healthier fellows; it has a fatal fascination for them, and there is no hope of reform; the pleasant sin, at first timidly glanced at with the half-startled look of shrinking modesty, has become a fate against which it is impossible to contend. The regular discipline of an asylum might, perhaps, be of some use in such case, for when men see their own follies or vices uglily reflected in others it sometimes has a beneficial effect. Every one knows that the Spartans used to make their slaves drunk, in order, by this example of degradation, to teach their children to avoid the vice of drunkenness; and most people have heard the story of the lunatic who, believing himself to be the Holy Ghost, was brought face to face with two other lunatics having the same delusion; he thereupon exclaimed, "I am the Holy Ghost, and you are both Holy Ghosts; there are not three Holy Ghosts, but one Holy Ghost," and went his way, and was straightway cured. Now, there are two reasons why it might be well to put all pure metaphysicians into a lunatic asylum—first, because when they saw there a demented patient busily continuing the strangest movements of his arms, and inquired (as from curiosity they certainly would do) what this seemingly purposeless industry meant, and were told that the poor man was engaged in spinning sunbeams into threads, then they might probably, like the Spartan boys, take a very profitable lesson to heart; secondly, because they must be as blind and insensible as the nether millstone if they did not recognise that here was a vast field of mental phenomena of which their system took no notice whatever, but in which Nature supplied exactly those experiments that in such a matter cannot be artificially made, yet are indispensable to the formation of a true inductive science. Oh, purblind pedant, thick cased in the heritage of hardened prejudices,

can you really believe that it is a monstrous error or oversight of Nature to have made so many lunatics? Is it that their primary intuitions need no explanation? When a man shuts his eyes he will see what, according as the spirit of his philosophical school prompts him, he may call Nothing or the Infinite; the metaphysicians call it the Infinite or the Absolute.

Sympathising entirely with Mr. Mill in the terrible onslaught which he has recently made on Sir W. Hamilton and his immediate followers, rejoicing with an exceeding great and somewhat malicious joy at the pitiable case in which that most artful philosopher, Mr. Mansel, has been left, and wishful certainly to join in the great jubilation which has followed the well-planned attack, we cannot but confess to a considerable surprise at the character of Mr. Mill's book. No one but will be ready and glad to acknowledge the deep debt of gratitude which this age owes to Mr. Mill. He is now a popular writer, as far as a philosophical writer can be popular. Herein, however, there is a symptom not altogether favorable. As long as an author is in advance of the thought of his age, he is not popular; but as soon as the world has reached his level of thought there is a great cackling raised around him. Though the fact then that a philosophical author is not popular by no means necessarily proves him to be in the van of progress, yet the fact that he is popular is a tolerably strong presumption that he is in close connection with his century, and not much ahead of it. The man who wrote for the fathers with scarce any recognition is applauded to the skies by the children, and is beginning to be forgotten by the grandchildren. *Woe unto you, therefore, philosophically when all men speak well of you!* Although then we regard Mr. Mill's great popularity as proof that he has lifted the age up to the level of his philosophy, that he has done such more than Herculean work, yet we do not regard that popularity as any evidence whatsoever that his line of thought is the most advanced or the best existing; on the contrary, it is rather a presumption that it lags behind. This is what we should like to explain when the enthusiastic admirers of Mr. Mill insist with earnest energy on eliciting a corresponding enthusiasm from us, as they are rather apt to become offensive in striving to do; only it is impossible to make those who call themselves "advanced thinkers" see anything but their own views once they get on their hobbies; they are quite as one-sided, bigoted, petulant, and intolerant as any religious section, and they unhappily sometimes want either the finer social feelings that spring from culture or the healthy feelings that are produced by a life of practical activity.

Having premised this protest against the attempt to sweep our judgment down a torrent of enthusiasm, we proceed to state the grounds of our surprise. These extend to both what has been done

and what has been left undone—acts of commission and acts of omission. Now, with regard to what Mr. Mill has done: he has demolished Sir W. Hamilton, which is very commendable; but he has done more than that, for he has confounded our just expectations by a most unnecessary exhibition of a formidable quantity of positive metaphysics of his own, which we conceive to be alien to the whole tenor of his previous life and to his genealogical antecedents. It is verily a sort of blasphemy against his philosophical progenitors. Let us trace them roughly from Hobbes downwards. Hobbes begat Locke, who begat Hartley, who begat Brown, who begat J. Mill, who begat J. S. Mill. Of whom begotten it is not so easy to say; only Hume, Kant indirectly, Priestley, certainly Bentham, and more lately Comte, have had their influence. Conceive the issue of this long line of illustrious ancestors, the author of the ‘Essay on Liberty,’ now descending to pure metaphysics! It is too horrible! In the name of outraged Experientialism protest must be made against this sin of commission.

The second point which we wish to make here is to mark a sin of omission. What reason can Mr. Mill give for ignoring entirely the whole school of physiological inquirers? What possible justification can be set up for leaving psychology not one jot in advance of where it was in the time of Locke. There can be no mistake about this: the psychology of Mr. Mill’s book is stagnant where Locke left it, and it is certainly in many points not up to the level of what has since been taught by Hartley, by Brown, and by his own father, Mr. J. Mill. The analysis of the human mind, as made by these philosophers, is the only one which at all harmonises with the recent great discoveries of physiology; and there can be no question that it is on the continuation of the lines laid down by them that the progress of knowledge must take place. Mr. Mill has a great opinion of the psychological method of inquiry into mental phenomena, and thinks Comte to have committed a great mistake in discarding it. Whether that be true or not is not the question here; we may admit it to be so, and still ask whether it is a sufficient reason for ignoring those important results of the physiological method of research which bear vitally on psychology—whether, in fact, because a certain method has some worth, it can therefore afford to dispense with the aid furnished by other methods? That it must be thus exclusive in order itself to live is, some will be apt to think, the strongest condemnation of it. Strange as the assertion may appear, it is the fact that Sir W. Hamilton had more of the physiological spirit than Mr. Mill, while Mr. Herbert Spencer’s psychology is rendered in some degree fertile by its inspiration.

Critics have, on the whole, found Mr. Mill’s book to be wonderfully effective, and some of them have gone into a sort of convulsion in the unavailing effort to express their full admiration. At the

risk of being thought to differ from an opinion simply because it is the common opinion, we must again give utterance to some disagreement. Not that there can exist two opinions with regard to the profound thought displayed, the admirable management of the weighty argument, the severe energy of the lucid style, and the abundant instruction conveyed—in all which the author is, and always has been, unequalled; but why should Mr. Mill give so much time and labour to such a purpose as the elaborate demolition of one whom the progress of knowledge had already greatly undermined, and who was gently sinking into his true position. It is not every day that the world gets its Stuart Mill, and when it is blessed with such a one has it not a sort of right to demand that he should give his strength to pushing forward as a pioneer the tracks of investigation, leaving the clearing away of rubbish to humbler hands? And in the present case has not the age a more special right of dissatisfaction, seeing that, apart from what is controversial, the greater part of what is positive in the book may be found in the 'System of Logic'? To these questions we can conceive two answers pleadable:—1. That it is a profitable and necessary work to destroy an idol when the worship of it is leading the people astray from the true path. 2. That it was highly desirable in a special way to impress upon this age a fact which it seemed prone to forget—the value of a science of psychology founded on the revelations of self-consciousness.

1. Now, with regard to the first of these pleas, it is necessary to admit its validity. It is one of the services that false prophets in philosophy or science do, that they make it necessary for some one more truly inspired to demolish them. In this way Sir W. Hamilton has provoked Mr. Mill to a work by which the pedestal on which that philosopher stands has been so shaken that it will require all the skill and industry of his admirers to make it firm again. As in the growth and development of the body there is a correlative degeneration or retrograde metamorphosis of organic element going on—a daily death in strict relation with the activity of life; so in the organic growth of thought through the ages there is a corresponding decay, or corruption, of the erroneous doctrines of the false prophets going on—a death of the false in strict relation with the growth of the true; thus healthy energy throws off effete matter, which itself in the very act of becoming effete gives up force that is available for the development of the living element of truth. Suppose that Mr. Mill, as an element in the mighty organism of humanity, had set himself to an original work of advanced philosophy instead of—what he could not help doing—rebelling against the false philosophy current, and striving with all his might to throw it off as an excretion, what would have happened? Why, plainly that which would happen in the bodily organism under like circum-

stances : while he and certain elements of the same kind, of congenial habit of thought, were going through an exuberant growth in an abnormal hypertrophy, all the rest of the constituents, of humbler kind, would be poisoned by the erroneous doctrines that ought to be made to undergo the retrograde metamorphosis, and thus be got rid of. The consequences would then be either fatal or so grave as to require the acute fever of a dangerous revolution to set matters right again. But by the course which Mr. Mill has taken, and which he could not help taking, because, as an element, he is constrained by the laws of the whole, the degeneration and the development are correlative, as in healthy organic activity ; and the mass of people who wear the pattern of their opinions as they do their garments, according to the fashion, are delivered from the danger of a fatal infection by false philosophical doctrine, and are duly enlightened. The first plea then is established ; and, so far as it reaches, we retract those timid objections which were striving for entrance into the mind. Effete doctrine, like effete matter, must be got rid of.

2. The belief in a psychology founded on the revelations of self-consciousness, or what he calls the psychological method, is firmly held, and has been strongly expressed, by Mr. Mill. In his 'System of Logic' he has pointed out what he conceives to be Comte's error in discarding it. In his article on Comte's philosophy in the 'Westminster Review' he has reiterated and enforced his arguments ; and he now returns to the charge in his 'Examination of Sir W. Hamilton's Philosophy.' He thinks that there is little need for an elaborate refutation of "a fallacy respecting which the only wonder is that it should impose on any one." This is a heavy blow, coming from one who calculates the force and reach of his blow ; but it does not settle the matter. An author whose psychology is not in advance of that of Locke, and who relies entirely on the method which was employed by Locke, will of a certainty be prejudiced in favour of a method which he has used so well, and against a method which has grown up without enlisting his sympathies, and which furnishes results opposed to some of his favorite doctrines. Mr. Mill is not, therefore, a perfectly unbiassed judge ; and he would, perhaps, have not done amiss to have entered into a more elaborate refutation than is contained in the two arguments which he does use ; for the fallacy has imposed upon many, wonderful as this is, and will probably continue to do so. The two answers which he gives are these :

(a) He says that M. Comte might be referred to experience and to the writings of his countryman, M. Cardaillac, and our own Sir W. Hamilton, for proof that the mind can not only be conscious of, but attend to, more than one and even a considerable number of impressions at once—as many as six simultaneous impressions, according to Sir W. Hamilton. Mark well this phenomenon, as it is not of frequent occurrence—that Mr. Mill is driven to call, in his trouble,

upon Sir W. Hamilton, and to take refuge under the shadow of his wing. We hold the refuge to be by no means a secure one. In the first place, we do not consider the presumed fact to be established uncontestedly by the assertion of Sir W. Hamilton or of M. Cardaillac, the unknown French author whom he has quoted, and from whom he has borrowed the idea. Many will still maintain, with Müller, that one idea can only call another into conscious activity through its own disappearance, as one wave disappears in the production of another; and it does not appear how those who prefer Hobbes' opinion, that one idea is obscured by a more active one, "in such manner as the light of the sun obscureth the light of the stars, which stars do no less exercise their virtue by which they are visible in the day than in the night"—it does not appear how they can support Sir W. Hamilton's assumption. In the second place, let there be admitted "*the great multitude of states, more or less conscious, which often coexist in the mind,*" as Mr. Mill expresses it: is anything really gained thereby? Does he seriously propose to base a science, the facts of which confessedly demand the most careful discrimination and the most scrupulous analysis, on what, by his own account, is in great part not simply feebly attended to, but almost out of consciousness?

Assuredly consciousness may exist in every degree of intensity; but can you, therefore, *scientifically* observe by self-consciousness a mental state which is scarce conscious? Instead of a multitude of coexistent mental states, *more or less conscious*, we submit that they would all need to be *most conscious* if they are to supply the foundations of a science. "It is true," says Mr. Mill, "that attention is weakened by being divided, and this forms a special difficulty in psychological observation, as psychologists have fully recognised, but a difficulty is not an impossibility;" and forthwith, without more ado, proceeds to his second answer. No doubt he felt that he was on slippery ground and that he must get quickly over it. A difficulty is not an impossibility, certainly, but an impossibility is always a difficulty; and the difficulty of attending and not attending to a mental state at the same time appears to be one that falls under the category of scientific impossibilities. But the strongest objection against Mr. Mill's answer is yet to come; he has scarce treated his readers fairly, for he has not let them know that this supposed co-existence of mental states has been a long-disputed question; they float along swimmingly on the lucid current of his style, not knowing of the rocks that are in the way. The fact is that many, after elaborate discussion, firmly hold that there is not a coexistence, but a sequence or alternation of states, single at the same instant of time, and succeeding each other with more or less rapidity.\* That an actual sequence of thoughts appreciable by time does occur, no one

\* 'Chapters on Mental Physiology,' by Sir H. Holland.

denies ; and it is clearly possible in such a matter that a sequence may occur that is not to us measurable by time, because it takes place so rapidly—in fact, with the rapidity of thought, as we say in common language, when we want to express a rapidity that surpasses measurement. The question then may well have relation to the rapidity of succession ; and neither hours, nor minutes, nor seconds, are available where time enters as an element almost infinitely divisible. Analogy is undoubtedly rather in favour of those who believe that the mind cannot maintain two distinct conscious impressions simultaneously ; that the association of ideas always involves succession ; and that the rapidity of change in mental states is such that consciousness can scarce follow the steps, while articulate speech certainly cannot. Of course the difficulty thrown in our teeth will be that we cannot be sure of the exclusiveness of the particular state of mind at each instant. It is perfectly fair to retaliate by saying that the other side cannot be sure of its non-exclusiveness ; and it is, at any rate, certain that the closer the examination of the individual consciousness the more does what appeared as co-existent compound resolve itself into sequent parts. We cannot undertake to define the individuality of a particular state of consciousness ; it is a task fit only for the scholastic ages. Material objects that are compound and complex have, by simultaneous or successive impressions on different senses, given origin to an idea that has its seat in a higher nervous centre than where sensation takes place, and which is certainly an individuality in consciousness. But we must demand of Mr. Mill how, in the name of fair play, he can claim the very problematical assumption of the coexistence not of five or six, but of a *multitude* of more or less conscious mental states, as evidence so strong in favour of the psychological method as to render it a matter of wonder that any one should have followed Comte in doubting its value. It is easy to foresee that Mr. Mill's way out of the difficulty will be to have recourse to his second answer. To this, then, we now pass, in order to try new conclusions, though much more of what might have been said against the first has not been said.

(b) If there is not an actual coexistence, but a rapid sequence of conscious mental states, Mr. Mill may maintain that the admission would not seriously affect his position, for they may be studied through the medium of memory. Hear what he says in the article in the 'Westminster Review' : "Secondly, it might have occurred to M. Comte that a fact may be studied through the medium of memory, not at the very moment of our perceiving it, but the moment after ; and this is really the mode in which our best knowledge of our intellectual acts is generally acquired. We reflect on what we have been doing when the act is past, but when its impression in the memory is still fresh. Unless in one of these ways we could not have acquired the knowledge which nobody denies us to have of what

passes in our minds. M. Comte would scarcely have affirmed that we are not aware of our own intellectual operations. We know of our observings and our reasonings, either at the very time, or by memory the moment after ; in either case by direct knowledge, and not (like things done by us in a state of somnambulism) merely by their results. This simple fact destroys the whole of M. Comte's argument. Whatever we are directly aware of we can directly observe." Are we then to consider ourselves gravelled by this answer? Not without a struggle, certainly. First, then, let us ask Mr. Mill if in his inmost heart he really believes that a man of the vast grasp of knowledge and the acute analytical power of M. Comte —a philosopher whom no one has praised more highly and done more for than Mr. Mill—did actually fail to perceive a fact so simple and plain that a wayfaring man, though a fool, could not miss it? Mr. Mill of course knows quite well that M. Comte did not miss it ; that, on the contrary, he entered into a disquisition to prove that consciousness directed to the observation of a particular state of mind falsified it ; and that he called as witnesses to the incompetence of the psychological method the two thousand years during which it has been vainly in vogue.\* Oh, ye of little modesty, do you dare still to uphold the full value of your method in the face of the direct testimony of two thousand grave and reverend years as to its comparative worthlessness? Will that which was not done by Plato and Descartes be done by you, following the same method? Without doubt it did occur to M. Comte that a fact may be observed through the medium of memory, but there occurred to him also in all probability, what does not seem to have occurred to Mr. Mill, the reflection that the simple observation of a fact through the memory, the remembrance of it, and the scientific study of it as a fact of consciousness, the introspective analysis of itself by the mind, were very different matters, and that a proposition true of the first might be utterly untrue of the last. We are not going to be so mad as to deny, any more than M. Comte did, that we do know something of our intellectual operations through self-consciousness ; on the contrary we hold, as M. Comte did not, that, properly used and not abused, this is a method of some value as a help to other methods ; but we are going to maintain that there is the widest difference in

\* "To direct consciousness inwardly to the observation of a particular state of mind is to isolate that activity for the time, to cut it off from its relations, and, therefore, to render it unnatural. In order to observe its own action, it is necessary that the mind pause from activity ; and yet it is the train of activity that is to be observed. As long as you cannot effect the pause necessary for self-contemplation, there can be no observation of the current of activity : if the pause is effected, then there can be nothing to observe. This cannot be accounted a vain and theoretical objection, for the results of introspection too surely confirm its validity : what was a question once is a question still, and instead of being resolved by introspective analysis is only fixed and fed."—On the 'Method of the Study of Mind.' The words are our own, but the substance of them belongs to Comte.

the world between simple observation, such as serves us in ordinary life, and the kind of observation necessary for scientific study ; and that though the psychological method, fulfilling the first humble office, may furnish valuable assistance, it is by itself utterly incompetent to the formation of a true mental science, for it is utterly incompetent for the latter office. What will be the reply to this assertion ? It will certainly be, that what is capable of simple observation may, through proper training, be made capable of scientific observation ; and that introspection is a very high kind of art, "an acquired dexterity which," as Sir W. Hamilton says, "cannot be taken out of the hands of the philosophers." Why, then, in the name of false doctrine, heresy, and schism, cannot two of them agree ? "There is no agreement between those who have acquired the power of introspection ; and men of apparently equal cultivation and capacity will, with the utmost sincerity and confidence, lay down directly contradictory propositions. It is not possible to convince either opponent of error, as it might be in a matter of objective science, because he appeals to a witness whose evidence can be taken by no one but himself, and whose veracity, therefore, cannot be tested." \*

Now there are two kinds of introspection—the *Transcendental*, or, as Mr. Mill prefers to call it, the *Introspective*, and the *Empirical*, or, in Mr. Mill's language, the *Psychological*.† The first he absolutely forswears ; the second he loves as David loved Jonathan, with a love surpassing the love of woman. But there are other mighty introspectionists, great in fame, who exalt exclusively the first method, regarding the second as a very humble hand-servant.‡ Here then on their own ground there is the blankest contradiction in regard to a most fundamental principle ; here is a desperate civil war going on. Under these circumstances we cannot be persuaded by Mr. Mill, charm he never so well, to appraise highly that high kind of introspective art, that acquired dexterity, which philosophers are presumed to attain unto. On the contrary, we rather sympathise with the following words of a great writer. "Consciousness, it will probably be said, is the best evidence ; and so it would be, if we were always certain what is consciousness. But while there are so many varying testimonies respecting this ; when Sir W. Hamilton himself can say, 'Many philosophers have attempted to establish, on the principles of common sense, propositions which are not original data of consciousness, while the original data of consciousness from which these propositions were derived, and to which they all owed their

\* On the 'Method of the Study of Mind,' p. 10.

† An objection to the change of names proposed by Mr. Mill is, that the *psychological* method is *introspective*. There are the *Transcendental Introspectionists* and the *Psychological Introspectionists* ; why, then, libel only the former ?

‡ Mr. Stirling, for example, in his recently published 'Secret of Hegel,' speaks sneeringly of Mr. Mill, and calls the late Mr. Buckle a "conceited schoolboy."

necessity and truth, the same philosophers (strange to say) were not disposed to admit ;' when M. Cousin and nearly all Germany find the Infinite and the Absolute in consciousness, Sir W. Hamilton thinking them utterly repugnant to it ; when philosophers, for many generations, fancied they had abstract ideas—that they could conceive a triangle which was neither equilateral, isosceles, nor scalene, which Sir W. Hamilton and all other people now consider to be simply absurd ; with all these conflicting opinions respecting the things to which consciousness testifies, what is the perplexed inquirer to think ?" The writer is Mr. Mill ;\* and one cannot but wish that he had given the reply.

The great argument that may be adduced against Mr. Mill's second answer is founded on the nature of memory. With half the ingenuity that is expended by metaphysicians in disputing concerning direct consciousness and memory, many pages might be filled with every possible kind of objection. One only shall be briefly hinted at. It is founded on what we conceive to be a fundamentally erroneous conception of the psychologists ; namely, that they always appear to regard the phenomena of memory as belonging to the laws of *light* rather than to the laws of *life*. They seem to think that a fact of memory is something stereotyped in the mind, of constant nature ; whereas it is truly an organic growth after a certain type, and is tinctured with the *subject's* individuality. What a man remembers depends very much upon what a man is : let two persons try to recall a series of events in which they were equally engaged, and had equal opportunities of observation, and, of a certainty, they would not fail to give according to the character of their feelings—and the feelings best express the individuality of a person—different accounts ; and even the same person will remember a thing differently according to the mood of mind which, from mental or bodily causes, he may be in. Because a thought grows or matures in the mind—because memory falls under organic laws, and because the organic changes take place in matter so exceedingly sensitive to changes in any part of the organism as nervous element is, therefore the memory of an event is not constant, but variable within certain limits ; and therefore also a psychology which converts a name comprising numberless facts of every sort and variety into a fixed entity, and thereupon allows the fictitious creation to tyrannise over the mind, is not in accordance with facts, but rightly belongs to a transitional metaphysical stage of human development. As a matter of fact, the defects of memory which are met with in consequence of disease of the brain are so numerous and so various in kind and degree, that it is impossible to give an adequate idea of them except by enumerating them in detail ; and yet these experiments provided for us by nature, these changes in the conditions of

\* At page 502 of the 'Examination of Sir W. Hamilton's Philosophy.'

the problem, which are exactly what we should wish to produce artificially if we had them not, are made no use of in mental science, because psychologists insist on discarding the physiological method. Mr. Mill, founding a psychology on memory, would yet ignore the most valuable and undisputed phenomena of memory: is it M. Comte's argument or Mr. Mill's which totters?

In taking leave of this second answer, we must direct attention to the closing sentence of it. "Whatever we are directly aware of we can directly observe," says Mr. Mill. Now, one might venture to deny that point-blank in regard to *subjective* phenomena; a pain in the stomach we are directly aware of, but we cannot directly observe it; we may be directly aware of a shivering feeling of cold when the actual temperature of the body, as shown by the thermometer, is not lowered, or of a feeling of heat when the bodily temperature is not raised; and therefore it cannot be that in such case we can directly observe by consciousness. A like inability directly to observe the real relations of a mental state of which we are directly aware exists also in regard to a multitude of feelings, especially those of subjective origin, that affect the mind. And if he could so direct consciousness to them as truly to observe them, it might still admit of a question whether the effect would not be what it notoriously is when consciousness is strongly directed to some bodily organ, namely, an augmentation of the intensity, or a perversion of the character of the organic action and of the feeling accompanying it. What else than this morbid action do many of the phenomena of so-called electro-biology testify to?

(c.) Our third and last objection is, not to any specific argument, but to the whole spirit and method of Mr. Mill's psychology. He ignores the physiological method, rejects entirely the historical pabulum which it has of late supplied in rich abundance, and, as a consequence, stands where Locke stood. In his examination of Sir W. Hamilton's philosophy he is as one who with great labour has raised a complicated scaffolding, in order to pull down an elaborately-stuccoed building, when all the while scaffolding and building are both undermined, and must soon come down in ruin hurled. In the arguments by which he attacks and defeats Sir W. Hamilton he is as one who labours to do with a multitude of blows from a feather what he might do with one blow from a flail. It is true that he refers to Mr. Bain's work with praise; but, unfortunately, Mr. Bain is not a physiologist, nor is his method physiological; he has quoted a number of extracts from physiological text-books that are not up to the present level of science, has promulgated some vague and objectionable theories about "nervous currents" which no physiologist would have done, and has then taken a flying leap into the psychological camp, and followed that method entirely; so that there is not unity in his book, and, as once before said, in it

the living is stifled in the embraces of the dead. An excellent chapter in Mr. Masson's book, one well worth studying by all metaphysicians, is devoted to setting forth the effects of recent scientific conceptions on philosophy, and to showing how different the questions that are referred to philosophy must become with the progress of scientific knowledge through the ages. The present quarrel with Mr. Mill is that he takes no notice of all this new knowledge ; that he goes on exactly as he might have gone on had he lived in the days of Aristotle ; that at a time when a new method, highly fertile, was available, he persists in trying to do, by the old method, what Plato, Descartes, Locke, Berkeley, and a host of others have not done. Now, we have not the slightest faith that ten thousand Mills will, following the same method, do what these great men have not done ; but there can be no question that had Mr. Mill chosen to avail himself of the new material and the new method which his great predecessors had not in their day, he would have done what no other living man could have done. How Mr. Mill can possibly suppose M. Comte, so sagacious in discerning the course of thought, and so profound in his general method, to be blind or witless in this important particular, completely passes comprehension ! Is it not a sufficient condemnation of any so-called science, that in a world where harmony, connection, and continuity of parts exist, it must remain isolated ? M. Comte thought so, and many will agree with him.

What, then, is the conclusion which we come to ? Certainly that if M. Comte was wrong to discard the psychological method, Mr. Mill has far outdone him in error by discarding the physiological method. Let any one who feels doubt about this read those parts of Mr. Mill's book in which he discusses what is understood by mind and what is understood by matter ; and if he fails to perceive the difficulties in which the author is entangled, let him take to his assistance the latter part of Mr. Masson's book, in which the "Examination" is examined. The belief in matter or an external world Mr. Mill holds to be a belief in "our actual sensations and in permanent possibilities of sensation," while the notion of mind he resolves into "a series of feelings with a background of possibilities of feeling." In what the notion of "permanent possibilities of sensation" is in advance of the old notion of matter, and in what the notion of a "background of possibilities of feeling" is different from the old notion of mind, when the realities signified by the words are looked at, that is by no means evident. In view of the difficulty in the way of his theory of mind presented by the mental phenomena of memory and expectation, however, Mr. Mill is compelled to add a curious rider :—"If, therefore, we speak of the mind as a series of feelings, we are obliged to complete the statement by calling it a series of feelings which is aware of itself as past

and future ; and we are reduced to the alternative of believing that the mind, or ego, is something different from any series of feelings or possibilities of them, or of accepting the paradox that something which, *ex hypothesi*, is but a series of feelings can be aware of itself as a series. The truth is that we are here face to face with that final inexplicability at which, as Sir W. Hamilton observes, we inevitably arrive when we reach ultimate facts . . . . I think by far the wisest thing we can do is to accept the inexplicable fact, without any theory of how it takes place, and where we are obliged to speak of it in terms which assume a theory, to use them with a reservation as to their meaning." And this is the end of the severe mental exercitations and acrobatic tumblings through which the introspectionists would have us go ! It may be inevitable, but we conceive that they might allow us to accept the fact without insisting on our going through such a purposeless tribulation ; not that any complaint can be justly made against them for exhibiting their feats, seeing that it is their profession. Many will agree with Mr. Masson that the above-quoted passage "is the most memorable passage, in its philosophical consequence, in the whole of Mr. Mill's volume. Were I to say that it reveals a trap-door, opened by Mr. Mill himself in the floor of his own philosophy, I should say what others will feel as well as myself. What concerns us here is that Mr. Mill avows that the difficulty he has stated leaves his definition of mind insufficient, unless with the accompaniment of a paradox. What is the advantage, then, of propounding such a definition ? Why not adhere to the notion of mind in the older constructive idealism, which regarded it as the unknown substance, or entity, or organism, which feels and thinks ?"

Though it may then plausibly be insisted by some that Mr. Mill has failed in his arguments against Comte, and that where he has deviated from that philosopher's track he has gone astray into psychological mazes, in which he wanders round and round as others have done before him, making much motion but little or no progress ; still the question remains whether he is effective against Sir W. Hamilton. Unquestionably so, on the whole. He has pointed out clearly how much Sir W. Hamilton deals in vague phrases, how apt he is to use the same phrase in different meanings, and how full of inconsistencies and positive contradictions his philosophy is. The supposed great doctrine of the relativity of human knowledge Mr. Mill analyses closely, and concludes that Sir William really "repudiated it in every sense which makes it other than a barren truism. In the only meaning which he really maintained there is nothing to maintain. It is an identical proposition, and nothing more." The term unconditioned, as used by him, is also afflicted with "an incurable ambiguity" and, by placing belief above knowledge, and holding that we have belief respecting the

unknowable, he continues to bring back as belief what, by reason of thought being necessarily conditioned, is rejected by him as knowledge. It is characteristic of him, Mr. Mill says, that if he makes a philosophical statement he seldom or never adheres to it. "Too often what he has affirmed in general is taken back in detail, and arguments of his own found to rest in philosophical commonplaces, which he has himself repudiated and refuted." Mr. Mill's forcible criticism of the "fundamental doctrine" of Sir W. Hamilton, of which so much has been made, the so-called "law of the conditioned," is admirable, and will well repay study. It has always been to us a marvel that any "mortal mixture of earth's mould" could for a moment believe that there was anything more than verbal mystification in Sir W. Hamilton's so-called law,—that the "conditioned," or what is known, lies between two contradictory hypotheses, both of them inconceivable or "inconditionate," but one of which must be true. How in the desecrated name of common sense can you make any proposition with regard to the inconceivable? In so far as you do so you condition it, which by the terms of the proposition cannot be. How can you say that two inconceivables are contradictory; or, again, that two contradictory inconceivables may not be true? However, Mr. Mill has clearly shown, by detailed argument, that this so-called "law of the conditioned" breaks down in both its parts. "It is not proved that the conditioned lies between two hypotheses concerning the unconditioned, neither of which hypotheses we can conceive as possible. And it is not proved that, as regards the unconditioned, one or other of these hypotheses must be true. Both propositions must be placed in that numerous class of metaphysical doctrines, which have a magnificent sound, but are empty of the smallest substance."

Much has been said as to the extreme candour and fairness of Mr. Mill in his controversy, and the admirable spirit in which he has conducted it; and we have an impression of having read somewhere something about the chivalrous courtesy of true knights. Very pretty, no doubt; and the ladies looking on at the tournament will be in ecstasies. But one cannot but confess to a sort of admiration for that earnest, desperate, unsparing warfare which was the fashion in the time of Milton, when a man having to kill another did it as best he could; and we are not aware that in real battles now-a-days men are particularly courteous as to the way in which they deal the fatal blow. Besides, if there is noxious doctrine about, it is not incumbent on a man to be very particular as to how he kills it, any more than it is incumbent upon him to be particular how he destroys a noxious reptile. Be that as it may, however, there is in Mr. Mill's book, notwithstanding the profession and constant display of candour, a practical unfairness in certain regards to Sir W. Hamilton. There is an unconscious bias springing from

the fundamentally different line of thought on which Mr. Mill moves, so that he detects and exhibits inconsistencies and contradictions where one who sympathised with Sir W. Hamilton's spirit, and criticised him from the same stand-point, would not acknowledge them. The proof of this will be found in Mr. Mansel's writings, in Mr. Masson's book, and even in a recent writer in the 'North British Review,' who finds that Mr. Mill has failed to perceive the acuteness and profundity of Sir W. Hamilton's doctrines, and has therefore misrepresented them, finding contradictions, through deficiency of sight, where there are none; this, too, notwithstanding that Mr. Mill is fairly entitled by a "Scotch hereditary connection" to discuss philosophy! The fact seems to be that where words are not used with any exact meaning, where they are often used in a more or less artificial sense, where there are different philosophic phraseologies, as is the case in metaphysics, those who proceed from different stand-points will constantly find contradictions in their opponents; and endless controversies may go on, the only good result of which is that they do tend in time to fix definite significations to words. An ingenious person might, perhaps, if he thought it worth the labour, extract from Mr. Mill special passages that would be found inconsistent not with the broad tenor of his principles, but certainly with particular arguments which he employs against Sir W. Hamilton. For example, in one chapter, Mr. Mill argues at length against what he calls Sir W. Hamilton's doctrine of unconscious mental modifications, in a manner which proves how little he has cared to study physiological science and modern German psychology, but further on in his book, when arguing on another point, he charges Sir W. Hamilton with ignoring the passive side of our mental nature. After pointing out that a mental act becomes by repetition secondarily automatic, and thereupon "has lost the character of an act, and become numbered among passive states," he goes on to say:—"When the mental phenomenon has assumed this passive character it comes to be termed a concept, or, more familiarly and vaguely, an idea, and to be felt, as it were, not the mind modified, but something in the mind; and in this ultimate phasis of its existence we may properly consider it, not as an act, but as the product of a previous act, since it now takes place without any conscious activity, and becomes a subject on which fresh activity may be exercised, by an act of voluntary attention concentrating consciousness on it, or on some particular part of it. This explanation, which I leave for the consideration of philosophers, would not have suited Sir W. Hamilton, since it would have required him to limit the extent which he habitually gave to the expression 'mental act.' It has been said, not without reason, of Condillac and others, that their psychological explanations treat our mental

nature as entirely passive, ignoring its active side. The contrary error may with equal reason be imputed to Sir W. Hamilton, that of ignoring the passive side." Three reflections occur to us in regard to these observations :—First, that they scarcely do justice to Sir W. Hamilton; secondly, that they are rather inconsistent on Mr. Mill's part; and, thirdly, that had Mr. Mill not so completely ignored German psychologists of the physiological school, and, in particular, if he had not ignored Beneke and his followers, from whom mainly Sir W. Hamilton borrowed his doctrine of the unconscious mental modifications, he would not have thought it necessary to "leave for the consideration of philosophers," in so crude a form, a suggestion which had already been deeply considered. Is it not, too, a part of the same apparent neglect of what does not belong to his own immediate school that he asserts, unjustifiably as regards Germany certainly, that "the best informed German and French philosophers are barely aware, if even aware, of the existence" of the law of inseparable association, long since insisted on by Hartley?

It is not difficult to perceive the reasons of the inconsistencies of Sir W. Hamilton. He was far more learned as a writer than he was profound as a thinker. As he read he either adopted the views of his author, more fully expounding and illustrating them, or, dissenting from them, they furnished the occasion of an elaborate refutation, or of an eclectic appropriation. Hence his many inconsistencies and contradictions; hence also much vagueness of thought lurking beneath an appearance of philosophical precision. Mr. Mill has justly said of him that he should have been the historian of philosophy.

But it is time to come to an abrupt end, though the complete programme has by no means been carried out. Had we not already outrun our limits, there are three questions in particular to which some attention might have been given. First, might have been quoted, with considerable sympathy, Mr. Masson's criticism on Mr. Mill's postulates, in order by its help to have displayed the illogical position which Mr. Mill occupies; secondly, we should, from a survey of the lines of progress of philosophy, have tried to show that Mr. Mill's post is entirely untenable, and must before long be abandoned, as it is outflanked on both sides by enemies; and, thirdly, it was part of the audacious design to have positively charged Mr. Mill with a want of imagination, not merely what is called poetical imagination, but of the true scientific and philosophical imagination—the highest outcome of a scientific training on a good foundation. Mr. Mill seems to have an admirable eye for the angles of life, but no eye at all for its curves; to delight in a sapless precision, which might be all very well if men did act from reason, or think logically—if the world was a world of Malthusian philosophers, and not a

weltering world of passion-driven creatures. A mechanical philosophy simply ignores the driving forces of humanity, the dynamical aspect of existence—those great depths of human feeling on which rests the acceptance of poetry, and even of religion, by mankind. How is it that, as a simple matter of fact, the old metaphysicians, Leibnitz, for example, and, great among the greatest, Spinoza, may be read by a lover of Shakespeare, Goethe, and even Richter, with pleasure and profit, while modern metaphysicians are often unreadable except in the way of a self-imposed penal servitude? Is it not because the former have a sap moving through their living limbs, while the latter are dry and withered trunks? Let us make appeal to the common instinct of mankind; which, so long as men are what they are, must have due acceptance. That is not necessary, however, for as long as one man exists whom a mechanical system of philosophy does not embrace, but who contradicts its principles, that system is condemned. Will any one say that it is a great impertinence thus positively to disparage recent metaphysics? An unanswerable reply is easily forthcoming: in this regard one had rather be damned with Goethe and Bacon than saved with Hamilton and Reid.

One word more concerning the lines of philosophical progress. Half a century ago, philosophy passed over into Germany; and from Kant it passed through a luxuriant transcendental development in Hegel, Schelling, Fichte, and their disciples. No attempt was made to transplant it into this country, if we except the desultory efforts made by Coleridge. But it has flourished well in Germany, and still flourishes, though not so vigorously as at one time. Side by side with it, however, there has gradually sprung up in that country a physiological school of psychology, which is developing most vigorously, and has supplied the material, acknowledged or unacknowledged, of all the latest progress in psychology. But what can be said of English philosophy, transcendental or empirical? That neither one nor the other has profited by union with its more vigorous German representative, and that both are, in consequence of a foolish isolation, now dwindling miserably, capable only of being galvanized now and then into a semblance of life. Does any one doubt this? Let him refer to the way in which Mr. Stirling, the most recent philosopher of the Transcendental school, ventures to speak of English Idealists. And of the materialistic or empirical school it may be truly said that it is not really so far forward as it was when Hartley or Priestley represented it; for it is at present a hybrid philosophy, labouring to combine incompatibles, and rejecting union with its most vigorous and fertile foreign representatives, those that are of its own species. But its fate is surely marked out, the signs of the times being already sufficiently plain to show that the current of German physiological psychology must soon sweep over England.

To those whose fearful ears catch with horror these faint footfall-echoes of the coming of what they regard as the great Antichrist, and who rise up in earnest and indignant warfare against the fore-shadowed reign of evil, a fable shall be related. Once upon a time, and not long ago, as the sequel will show, a bull, big with the pride of power and disdainful of the slight bounds of its pasture, broke through the feeble hedge and with royal step wandered on to an adjacent railway. Arrived there, it gazed around with superb front, tossed its haughty head, and roared defiance to gods and men. Suddenly in the distance appeared, disappeared, then steadily flared a red glare, odious to bulls ; nearer and nearer it approached, shaking red defiance in the face of insulted bovine majesty. Oh, sacred god that took the form of bull and meekly bore away Europa is such dire insult to be endured ? No ; by the shades of tauric ancestors, no ! Straightway the enraged animal bent its royal head, poised well its bloodthirsty horns, firm fixed its angry sinews, and with stiff outstanding tail, and with a mighty rush, like that of mountain torrent, or enraged cat or female, bore down in bellowing fury upon the approaching enemy. Terrific was the crash of the meeting foes ; but who shall relate the issue of the battle ? Scattered fragments of bull's limbs strewed the ground around ; its sorrowing master heard no mention more of his truant animal ; there was deep grief amongst the widowed herd ;—and the express train arrived punctually at its destination.

Our last words must be apologetic. To have discussed so freely and positively the opinions of a philosopher standing so high as Mr. Mill stands, may be deemed presumption ; but there are two excuses pleadable—first, that it has been done out of a sense of gratitude, because there is no living man to whose writings this age perhaps owes so much as to his ; and, secondly, because this review has been written hastily as a duty, thought being put into writing as it arose in the mind, and that which was once written standing as it was first written. Under these circumstances, what is energetically expressed will be explicable, and what is superficial will not excite surprise. We make the reader sure amends by concluding with a remarkable passage from the chapter in which Mr. Mill criticises the philosophy of the conditioned as applied by Mr. Mansel to religion—“ If,” says Mr. Mill, “ instead of the ‘ glad tidings’ that there exists a Being in whom all the excellences which the highest human mind can conceive, exists in a degree inconceivable to us, I am informed that the world is ruled by a being whose attributes are infinite, but what they are we cannot learn, nor what are the principles of his government, except that ‘ the highest human morality which we are capable of conceiving’ does not sanction them ; convince me of it, and I will bear my fate as I may. But when I am told that I must believe this, and at the same time call this being by the names which express

and affirm the highest human morality, I say in plain terms that I will not. Whatever power such a being may have over me, there is one thing which he shall not do—he shall not compel me to worship him. I will call no being good, who is not what I mean when I apply that epithet to my fellow-creatures ; and if such a being can sentence me to hell for not so calling him, to hell I will go." Should this come to pass, then, reverently be it spoken, "may we be there to see!"

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### CLINICAL CASES.

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*Cases illustrating the use of Digitalis in the treatment of Mania, recent and chronic.* By S. W. D. WILLIAMS, M.D., L.R.C.P. Lond., late Acting Medical Superintendent, Northampton General Lunatic Asylum.

DR. ROBERTSON published in the January number for 1864 of this Journal, a series of cases on the efficacy of digitalis in the mania accompanying the early stages of general paresis. Since then, digitalis has been regularly used at Hayward's Heath Asylum, and its beneficial effects have been made apparent in the various cases of mental alienation accompanied by cerebral excitement.

With a view to further illustrating the use of this drug, Dr. Robertson has allowed me to have access to his case-books and notes on the subject, and given me permission, during my temporary residence at Hayward's Heath, to test the efficacy of the medicine in all suitable cases.

As Dr. Robertson's paper, already referred to, tends to show the almost specific action of digitalis in allaying the excitement of impending general paresis, I have not considered it necessary to give any cases of that kind, especially as both Dr. Robertson's experience since he wrote that paper, and my own at Northampton, clearly confirm the views he then enunciated. The following cases, therefore, will be found to be confined to illustrating the use of digitalis in the excitement accompanying mania in its acute and chronic forms, and also when complicated with epilepsy.

**CASE I.—Acute mania; only partial benefit from morphia and the wet sheet; quieting effect of digitalis; ultimate recovery.**—C. B., No. 716, male, æt. 30 years, married, admitted at Hayward's Heath, February 5th, 1865.

*History of case.*—Has always been a steady hard-working man, and has enjoyed, generally, very good bodily health. There is no hereditary taint. The attack has lasted about two weeks, and was preceded by an unusual and

excessive attention to religious subjects. He has been extremely dangerous and violent, and has had but little sleep lately, but is not suicidal.

*State on admission.*—He is a strong, well nourished man, apparently in good bodily condition; face very flushed, pulse 100, full. Tongue dry and coated. Mentally, he is extremely agitated, very noisy and incoherent, loudly proclaiming, in profane and disgusting language, that he is God and Jesus Christ, and so violent that it requires three or four strong men to restrain him.

*Progress of case.*—February 6th.—Was kept in wet sheets all night, and frequently induced to take opiates and stimulants. Quieter this morning; pulse reduced to 72. Bowels acted freely after taking three grains of calomel.

9th.—Seemed to be progressing favorably until last evening, having taken plenty of nourishment and slept frequently, but became very violent and noisy about 8 p.m., and although packed he did not become any quieter until four doses of opium had been administered.

10th.—Still so violent that although placed in pack he managed to struggle out of the sheets; was again placed in pack at 3 p.m., and ordered 3j of Tinct. Digitalis every two hours. At 7 p.m. he was perfectly quiet, face and surface generally very pale and cold; pulse 65, not so strong. Had had in all, 3ij of the tincture.

11th.—Passed a quiet night, and is calm this morning; pulse greatly reduced in strength, but very rapid.

March 6th.—Has progressed on the whole favorably since the last entry, until to-day; his general health having improved and his paroxysms of excitement having been much less frequent and much less severe. From 8 a.m. to 3 p.m., however, he has been extremely noisy and excited, and both wet and dirty. Ordered Tinct. Digitalis 3j ter die.

7th.—Became quiet after having two doses of digitalis; slept all night.

9th.—Continues to improve. Digitalis reduced to 3ss doses.

19th.—Has been having a Roman bath daily, which has improved his general health. Was inclined to become excited to-day, but by increasing the dose of digitalis the excitement soon subsided.

Again, on the 20th April he had a very severe relapse, with all the old symptoms of extreme violence, &c. Ordered Tinct. Digitalis 3ss ter die. After this his mental condition gradually resumed its normal state, and he was ultimately discharged recovered.

**CASE II.—Acute mania, with symptoms of approaching violence and excitement; immediate use of digitalis, followed by abatement of symptoms.**—H. M.—, No. 1010, male, single, æt. 39 years. Admitted at Hayward's, Heath October 4th, 1865.

*History of case.*—But little known. Was found by the police on the 30th ult., wandering about Brighton, and was taken by them to the workhouse. Was quiet for the first two days, but afterwards became very violent, abusive, and at times incoherent, sleeping little at night.

*State on admission.*—Bodily condition apparently good; countenance, however, a little flushed and pinched. Pulse 84; respiration rapid, 21. Tongue white, and a little coated; skin bedewed with moisture. On being addressed he will answer questions collectedly for perhaps two or three minutes, but if the conversation is continued beyond that time, his sentences begin to want connection, and, finally, he becomes quite incoherent and inclined to be excitable. It is evident from his manner, which is suspicious and uneasy, that if much interfered with or opposed, he would become violent.

*Progress of case.*—He was restless and disturbed for some hours after admission; and being even worse the next day, 3ss doses of Tinct. Digitalis were ordered to be given him three times a day.

October 6th.—Quite calm and happy. Pulse reduced to 60, slightly intermittent ; respiration 14, much less laboured. To omit medicine.

8th.—Pulse remained intermittent all day yesterday, but is regular to-day, and somewhat increased in frequency. Inclined to be more excitable, and is less coherent in his conversation. Repeat medicine twice daily.

17th.—Since the above date he has remained perfectly quiet and manageable ; the medicine has been to-day omitted, and he seems in a fair way to a speedy recovery.

In this patient the digitalis was given before any great excitement came on, and it certainly seemed to exercise a very decided effect in restraining what appeared to be a well-marked case of incipient acute mania.

**CASE III.**—*Mania, acute at first, but, from failure of all treatment, becoming chronic ; marked in its chronic stage by violence and excitement ; partial abatement of excitement under use of digitalis.*—E. F., No. 651, female, married, æt. 35 years. Admitted at Hayward's Heath, July 30th, 1862.

*History of case.*—Has an aunt and uncle insane. Her insanity has been of two weeks' duration. The exciting cause is said to be an attack of acute rheumatism, from which she has just recovered. Is both suicidal and dangerous.

*State on admission.*—Weak and exhausted, and pulse feeble but rapid. Very incoherent, noisy, and excitable, and inclined to be violent. Considerable uterine disturbance.

*Progress of case.*—Remained in a very precarious condition for many months. At times so exhausted from constant excitement and refusal of food, as to almost render her death inevitable ; then, after a few days' partial quiet, she would become as noisy as ever. In this state she remained for some time ; almost every variety of treatment was tried without any permanent effect, and as the more acute cerebral symptoms began to subside and her general health improved, she slowly lapsed into a state of chronic mania, with symptoms of great irritation.

On December 2nd, 1862, she was still noisy and excitable, and very destructive, but took her food well, and slept well. Still suffering from frequent uterine disturbance. Ordered Tinct. Digitalis  $\frac{3}{j}$  ter die.

For the first day or two after commencing the digitalis she was more restless and excited than ever.

February 2nd, 1863.—Much better. Uterine function natural, for the first time since admission. The medicine was continued in diminished doses, for many months, and although still very insane, she is seldom much excited, but, on the contrary, makes herself very useful in the kitchen department.

**CASE IV.**—*Mania, acute, with several relapses ; steadily controlled by the use of digitalis ; a permanent cure.*—T. H., No. 833, æt. 45, married ; a carpenter. Admitted at Hayward's Heath, July 1st, 1864.

*History of case.*—Is said to have interested himself much in politics, and after the visit of Garibaldi to have become insane ; when, although a temperate man, he took to drink. He was sent to the asylum within a month of his attack.

*State on admission.*—Said not to have slept for three weeks, and to have refused food for fourteen days. Was in a state of recent mania, rambling and incoherent ; at one time violent, and again depressed, and unable to give any account of himself. His bodily health was much reduced ; tongue foul. Pulse 120.

*Progress of case.*—Slept well after a grain of morphia with some brandy. Bowels freely opened by croton oil ; took his breakfast. The mania returned on the nights of the 3rd and 4th, and he was placed on  $\frac{3}{ss}$  Tinct. Digitalis three times a day. This treatment was continued until 14th August, with a

gradual abatement of the symptoms. Pulse 60, and intermittent. Digitalis was omitted, but was again given in the same doses on the 28th, in consequence of a recurrence of his previous symptoms. Pulse then 80 and strong.

September 10th.—Much better; working in the carpenters' shop. Pulse 50, intermittent. Digitalis omitted.

16th.—Raving all night; excited, and disposed to violence this morning. Pulse 80; 3ss of Tinct. Digitalis three times a day. This was continued with occasional omission, according to the state of the pulse, until the 29th of October, when he was much better, and resumed his work.

On the 21st of November he had a similar relapse, and he was kept under the influence of the digitalis with marked and immediate improvement, until the beginning of January, 1865, when the medicine was omitted. Until his discharge, on the 3rd of June, he was regularly employed in the carpenters' shop. He has subsequently been heard of as quite well.

*CASE V.—Mania, recent; failure of opiate treatment; temporary improvement, followed by relapse under digitalis, which caused constant sickness; subsequent recovery without further treatment.*—H. H—, No. 955, female, single, æt. 50 years. Admitted at Hayward's Heath, May 4th, 1865.

*History of case.*—Has had three or four previous attacks, the first having been first brought on through disappointment in love. The present has lasted about fourteen days, and has been marked by more than usual excitement and a greater display of childishness. Other members of her family have been insane.

*State on admission.*—Physically she is in fair condition; pulse 96. Tongue foul and coated. Mentally, she is much excited, noisy and incoherent in conversation, and disposed to be violent in her conduct. Expression wild and vacant.

*Progress of case.*—May 5th.—Had half-a-grain of morphia in a pint of porter last night, but was noisy and restless, and incoherent all night, and still remains so.

24th.—The morphia has been continued up to the present date, but with no sign of improvement; it is to be omitted, and 3ss doses of Tinct. Digitalis given three times a day in its stead.

30th.—Pulse reduced to 60; very much calmer; good nights; improved appetite.

June 10th.—Pulse 60, intermittent; sickness after medicine. Digitalis reduced by one half.

July 7th.—Not so well. Very violent and excited at times; delusions strong. Digitalis to be reduced in quantity to ten drops.

30th.—These small doses of digitalis ceased to affect the pulse, but caused frequent sickness, and were consequently omitted.

She continued without treatment in a state of great excitability until the 20th of August, when a marked and sudden improvement in her mental state occurred. She steadily continued to improve, and was discharged cured on the 25th of November.

*CASE VI.—Acute mania, with delusions of a religious character; opiates given without improvement; use of digitalis; marked improvement almost immediately; recovery.*—G. F—, No. 1004, was admitted at Hayward's Heath, September 21st, 1865.

*History.*—Single, æt. 23, a schoolmaster. Was discharged from the Chichester Union School for trumping up false reports against the union master. Used to attend revival meetings, at which he was one of the speakers. Latterly has taught a private school. No hereditary insanity in his family.

*State on admission.*—Physically, he was in fair condition. Tongue white;

bowels confined ; pulse firm and quick, 97. Mentally, he is extremely wild and excited ; talks in a most incoherent manner ; rambles from subject to subject ; is very deluded ; says that the devil is trying to overturn his faith, but that he will subdue Satan ; believes himself to be enlightened by direct revelation from God himself, and that he receives visits from spiritual beings, who direct his steps. Last night he lay for some hours in a cabbage bed, to receive, as he declared, a revelation from the Spirit.

*Progress of case.*—September 22nd.—Had a warm bath on admission, but made great resistance when changing his clothes. Ordered 3j of Taylor's Liquor Opii every night. This was continued until the 24th, when an aperient was given, but towards evening he became so extremely wild, incoherent and unmanageable, that it was necessary to remove him to a padded room. On the following day (the 25th) 3j Tinct. Digitalis were prescribed three times daily.

27th.—Improved ; still taking digitalis ; appetite very much better.

29th.—Very much improved ; gives no trouble ; eats and sleeps well ; amuses himself at playing draughts, &c.

October 6th.—Conversation coherent, and tolerably rational. Pulse still full and strong. A tendency to relapse checked by the use of the digitalis, which had been omitted. Continues convalescent (December 1st).

**CASE VII.**—*Acute mania ; excitement prolonged over many months ; failure of opiates and water treatment ; improvement under digitalis.*—J. A., No. 885, female, single, æt. 27 years. Admitted at Hayward's Heath October 30th, 1864.

*History of case.*—No hereditary taint. Has been a very well conducted, industrious person. Was taken ill two months ago, the first symptom she exhibited being strangeness of manner. Since then she has gradually become extremely noisy and excitable, and disposed to violence.

*State on admission.*—Bodily condition good ; face flushed ; skin hot ; pulse rapid and full. Quite incoherent and very noisy, jumping about, singing and screaming.

*Progress of case.*—When first admitted the water treatment, with sedatives, was strictly persevered in, and although she had occasional remissions of the excitement there was no permanent improvement until November 12th, when, having menstruated well, she seemed to improve for a few days, but relapsed on the 16th, and was soon worse than ever. So she continued for some months, getting a little better and then relapsing again ; ultimately digitalis was ordered, and on March 3rd an entry was made, "Not much better, very excitable and noisy. The medicine has great effect in calming her, but has to be renewed again and again." Soon after this, however, she lost all excitement, and by June was convalescent. October 28th, discharged recovered.

**CASE VIII.**—*Mania recurrent ; excitement immediately allayed by digitalis ; removed to Hants Asylum.*—H. W., No. 993, female, single, æt. 49 years. Admitted at Hayward's Heath May 19th, 1865.

*History of case.*—Has had two previous attacks ; the present illness has lasted about four days, and is supposed to have been induced by the time of life to which she has arrived, there being considerable uterine irregularity. Is dangerous, but not suicidal.

*State on admission.*—Noisy, excitable, incoherent, and restless. She has strange and erroneous ideas on many subjects, makes the most absurd remarks, and endeavours to perform the most ridiculous actions. She looks pale and haggard, but not otherwise unhealthy.

*Progress of case.*—May 21st.—Was placed in the padded room last

night, and ordered 3ss of tincture of digitalis every six hours. The nurse reports this morning that, after taking one dose of the mixture, she passed a very quiet night. Omit digitalis.

May 30th.—Much calmer; good nights; eats well. Has had no medicine since 21st inst. Still deluded.

July 4th.—Very noisy again, and troublesome. Repeat digitalis.

7th.—Quieter; a good deal improved; continues taking small doses of digitalis.

September 13th.—Removed to Hants Asylum. Had been free from excitement since last entry, but still retains some of her delusions and queer ways.

**CASE IX.**—*Chronic mania, with excitement; freedom from excitement under use of digitalis.*—S. R., No. 989, female, single, æt. 34 years. Admitted at Hayward's Heath, August 8th, 1865.

*History of case.*—Lived with her father, at New Shoreham. Was a healthy, cheerful young woman up to the age of eighteen years, when she suffered severely from inflammation of the eyes. On recovering, she shortly manifested symptoms of insanity. Seven years ago was sent to St. Luke's, and remained there a year; but was discharged incurable, and has lived at home for the last six years. Her violence and destructive habits have, however, at last become too strong to admit of her any longer remaining at home.

*State on admission.*—In good bodily condition; plump and well nourished; pulse and tongue healthy. Mentally she is incoherent; has scarcely any memory; is noisy and destructive, and is continually swearing at and abusing those around her.

*Progress of case.*—August 12th.—Remains restless and noisy, abusing every one within her reach, and at times tearing up her clothes. Bodily health good. Ordered thirty drops of digitalis three times a day.

20th.—Quiet since the last entry; there has been no violent conduct, and no attempt to destroy her clothes.

October 19th.—Continued to take the digitalis for some time, but still remaining quiet it has been omitted. She employs herself in the kitchen, enjoys good bodily health, and appears to have no delusion, but is slowly lapsing into a state of dementia.

**CASE X.**—*Chronic mania with delusions, and frequent attacks of excitement; failure of all treatment except digitalis.*—S. E. S., No. 740, male, single, æt. 31 years. Admitted at Hayward's Heath, May 4th, 1863.

*History of case.*—Temperate, industrious man. Had an attack three years ago, when he was confined in Hanwell Asylum; the present attack has lasted about three weeks, and first manifested itself by his giving peculiar views on religious subjects.

*State on admission.*—In a reduced state of bodily health; pulse feeble; tongue pale and tremulous; pupils dilated; very excitable and restless, and labours under delusions of a religious nature. His expression extremely wild and suspicious. Answers ordinary questions rationally.

*Progress of the case.*—May 8th.—On admission he was placed on extra diet, with porter, and ordered an opiate nightly; his bowels were also well relieved by an aperient. Under this treatment his bodily condition gradually recovered itself, and he became somewhat quieter and less deluded, but on the 22nd his pulse rose to 108, and he became very excited, and even violent. The usual opiate was a little increased, but failed to procure him a night's rest.

23rd.—Appears quite worn out and exhausted by his excitement, but there is no abatement in its violence, and his pulse has increased to 120, and

is very feeble. Ordered Tinct. Digitalis 3ss ter die. That night he slept for some hours, and the next morning he was free from excitement, although still much deluded, and his pulse had gained strength.

He continued to take the digitalis in reduced doses, and soon was able to employ himself in the shoemakers' shop. He was removed to the Kent Asylum in August, 1863, and although he still remained very deluded, there had been no recurrence of the excitement.

**CASE XI.**—*Chronic mania; recurrent excitement, with delusions chiefly of self-importance; abatement of excitement and delusions under the use of digitalis; digitalis omitted; return of excitement and delusions; again checked by use of digitalis.*—J. M., No. 963. Admitted at Hayward's Heath, May 25th, 1865.

*History.*—Single, æt. 44. But little known of him. Has only returned from America three weeks, where he lived sixteen years; says he went out to look for his brother, that he was in the New York Lunatic Asylum for five years, and that he worked his way home.

*State on admission.*—Bodily condition fair. Mental condition, a little incoherence of thought; some delusions about people talking to him from New York; strong feelings about the American Union; declares himself to be commander-in-chief of all the forces, and that the war will never terminate until a certain woman, named Street, living at Crawley, Surrey, dies.

*Progress of case.*—May 28th.—Very noisy and violent the first day. Strong delusions as to wealth and possessions. Has had, for four days, 3ss of tincture of digitalis three times a day; quite calm to-day; conversation connected; appetite good; pulse 50; face pale. Digitalis to be reduced to 3ss at bed-time only.

June 6th.—Improved in bodily health; calm, and inclined to be industrious, helping in the wards, &c.

July 10th.—The digitalis was stopped some little time ago, during which time he became very restless, and his old delusions were returning with all their force. It was commenced last night again, and he had a good night's rest. Pulse 70.

August 13th.—Pulse 80. Had become very excitable and restless again, and very deluded as to American events. Attempted to escape on every favorable opportunity. On inquiry, it appeared that by mistake his nightly dose of digitalis had been reduced to 1½x. Ordered 3ss twice a day.

20th.—Quiet. Pulse not affected. Delusions much less prominent in his conversation.

October 15th.—Is still deluded, but remains free from excitement, and works industriously with the mat maker.

**CASE XII.**—*Mania passing on to dementia, arrested by the use of digitalis; discharged improved to the care of his mother.*—E. L. M., No. 946, male, single, æt. 18 years. Admitted at Hayward's Heath, April 8th, 1865.

*History of case.*—Always of weak mind, but becoming excitable and violent about eight months ago, was placed at St. Luke's, and from thence removed here.

*State on admission.*—In a reduced state of bodily health; face pale and anaemic; pulse feeble, 90. Mentally, he seemed to be bordering on dementia, refuses to answer questions, is sullen and suspicious, and sometimes disposed to violence; restless and disturbed at night, often taking off and tearing his clothes.

*Progress of the case.*—As soon as ever his general health had improved a little, he was placed on 3ss doses of tincture of digitalis thrice daily, and although for the first day or so after it was commenced he appeared to be even more excitable than before, when the pulse began to be affected he

became calm, and afterwards, whenever he gave symptoms of excitement, a few doses would soon quiet him. This treatment was continued with success, and on October 11th he was discharged, mentally as sound as it was possible for one with so weak an intellect to become.

**CASE XIII.**—*Chronic mania, marked by strong delusions and recurrent paroxysms of excitement, noisy, and occasional violence; improvement under use of digitalis.*—J. B., No. 722, male, single, æt. 35 years. Admitted at Hayward's Heath, February 24th, 1865.

*History of case.*—A sailor; nothing known of him beyond the fact that he was admitted into the Asylum at Rouen on October 27th, 1862, and from thence removed here.

*State on admission.*—In fair bodily condition; pulse 90, somewhat feeble; pupils contracted. Very incoherent in his conversation; expression wild and changeable; full of delusions of an excited character, thinking that he has direct communion with the Deity, and a special mission to perform.

*Progress of the case.*—Stimulants and opiates were assiduously administered to him for many months, but with scarcely any abatement of the excitement, or weakening of the delusions, although a certain amount of physical improvement was observed. On April 12th 3ss of tincture of digitalis was ordered three times a day, and on November 3rd the following entry was made in the case-book: "Still continues full of delusions; has taken digitalis twice a day, since April, without any injurious effect to his health, and with a very marked calming effect on the cerebral excitement."

**CASE XIV.**—*Chronic mania, with recurrent attacks of excitement, partly due to intemperance; abatement of all excitement and freedom from recurrence of attacks under the use of digitalis combined with opium.*—P. P., No. 991, female, æt. 47 years. Admitted at Hayward's Heath, August 25th, 1865.

*History of case.*—A readmission; was discharged from this asylum about three years ago, cured; wife of a house-painter. Has been drinking for some time, and is evidently suffering from its effects. The present excitement has lasted about ten days, and has more especially manifested itself in acts of violence towards her husband.

*State on admission.*—Bodily condition. Body well developed, weight being 10 stone 9 lbs. Pulse quick and tremulous; tongue coated with a white fur. Mental condition. Full of delusions, and talks of them in a wild, incoherent manner. Fancies that her husband has robbed her of a sum of money. Very abusive, making use of the most foul and obscene language.

*Progress of the case.*—August 26th.—Had a bath on admission. Went to bed at the ordinary time, and remained quiet until about ten o'clock, when she became violently excited, beating at the door and screaming. The bath was repeated, with the douche on the spine for two minutes. She was then packed, and had 3j of tincture of digitalis with 3ss of Taylor's Liquor Opii, and a second dose at 2 p.m. Still remaining noisy, she was kept in pack, and at 10 a.m. had 3ij of tincture of digitalis with 3ss of Taylor's solution and a glass of brandy; 12.30 p.m., still noisy and violent. She has taken two glasses of brandy and soda-water. Repeat draught.

27th.—Slept well during the night, and is quieter this morning.

September 15th.—Continued 3ss of Tinct. Digitalis three times a day, up to the present date, when the pulse becoming slightly intermittent it was discontinued. She continues to improve, and is calm and quiet, and employed with her needle.

December 12th.—Convalescent.

**CASE XV.**—*Congenital idiot and epileptic; extremely dirty in his habits; destructive, noisy, and restless; marked improvement under use of digitalis.*—

C. A.—, No. 694, male, single, æt. 12 years. Admitted at Hayward's Heath, November 15th, 1862.

*History of case.*—Epileptic and idiotic from birth. Not suicidal, but at times very violent, and always dirty in his habits. Father and mother healthy, and no taint of hereditary insanity.

*State on admission.*—Bodily condition much reduced; face pale and anaemic; pulse very feeble and rapid; extremities cold. Mentally, he appears to be the subject of almost the worst form of idiocy, and beyond swallowing when food is placed in his mouth, and making strange noises and uncouth gestures when irritated or alarmed, he appears quite incapable of taking care of himself or following out the requirements of his social existence.

*Progress of the case.*—The treatment was first directed towards improving his general health, and to that end he was put on port wine, beef tea, &c., daily, and had a cold bath every night. By December his general health had much improved, and he was put out to board with one of the artisans, but it was soon necessary to readmit him into the asylum again. About this time he became subjected to chorea, attended by obstinate looseness of the bowels, passing the most offensive motions, and as his habits were very dirty he became a perfect nuisance to all around him. He was ordered to take of Hydrgarg. cum Cretā gr. v, twice a week, and one ounce of the following mixture three times a day: Rx. Tinct. Ferri S. Chlor. ʒj, Potassæ Chlor. ʒj, Aquæ ad ʒvj. Ft. Mist.

But little improvement manifested itself, however; he still remained noisy, restless, destructive and dirty, and his case appeared hopeless.

October 28th, 1864.—Ten minim doses of the Tinct. Digitalis were commenced to be given twice a day, and were continued, with but slight intermission, for many months. He is now, for an idiot, a very presentable person. He exhibits none of the irritability, violence, or destructiveness he formerly was so noted for; neither are his habits, as a rule, dirty, but on the contrary, he seems happy and contented, looks the picture of health, and is perfectly amenable to control—a very different object from the wretched spectacle of this time last year.

**CASE XVI.**—*Epileptic mania; marked effect of digitalis in curbing the violence attending the epileptic paroxysm.*—T. T.—, No. 1006, single, æt. 36 years. Admitted at Hayward's Heath, September 23rd, 1865.

*History of case.*—Epileptic since fifteen years of age. The paroxysms come on about every two months, last several days, and are generally attended by great excitability and a strong tendency to violence, with partial incoherence.

*State on admission.*—In fair bodily health. A well made, muscular man. His mind is much weakened, and he has delusions and erroneous ideas on many subjects. His general temper seems to be morose and sullen, and his manner and expression convey the same impression.

*Progress of case.*—September 24th.—Had a bath on admission; slept well; has had no motion from his bowels. Ordered a dose of salts and acid, which he refused to take. Eats well, but is very sullen and morose. Is very troublesome when being dressed and undressed. To have a dose of croton oil in his food.

26th.—Better to-day; bowels have freely acted.

October 16th.—Suffering from an epileptic relapse; has had several fits, and is so violent that it is necessary to keep him in bed in a single room. Bowels confined. Ordered an aperient.

17th.—Bowels have acted freely. Still remains in so excited a condition that it is quite dangerous to enter his room. Ordered ʒj Tinct. Digitalis this evening and another to-morrow morning.

18th.—Is quiet and rational to-day, and able to be up and associate with his fellows.

**CASE XVII.**—*Epileptic mania; marked by great violence on each recurrence of the fits; entire abatement of excitement under use of digitalis.*—D. B., No. 309, single, æt. 27 years. Admitted at Hayward's Heath, January 21st, 1860.

*History of case.*—Had been an inmate of Grove Hall Asylum since April, 1853; and his character was that of a dangerous epileptic, quiet at times, but when suffering from his fits almost unmanageable. So he continued for some years after coming to Hayward's Heath, if anything becoming worse. In the early part of 1864 he was placed on full doses of Tinct. Digitalis, and very soon its power was manifested by his passing through his epileptic seizures without their being accompanied by any violence. Since then he has, with but few intermissions, taken 3*j* of Tinct. Digitalis daily, and still continues to do so. His general health is very good, and he has become quite tractable and well behaved.

**CASE XVIII.**—*Epileptic mania, accompanied by extreme violence, and marked homicidal paroxysms; failure of the wet sheet; considerable amelioration in his condition under digitalis treatment.*—H. H., No. 466, male, married, æt. 46 years. Admitted at Hayward's Heath, January 24th, 1865.

*History of case.*—Has been subject to attacks of epilepsy for the last fifteen years; they recur every six weeks or two months, and are supposed to have been originated by exposure to choke-damp when engaged at work in a railway tunnel. The attacks have lately gradually become more severe, and are accompanied by paroxysms of great violence and excitement. No hereditary taint of epilepsy.

*State on admission.*—A strong, powerful fellow, in very fair bodily health, but covered from head to foot with wounds, excoriations, and bruises, caused partly by knocking himself about and partly by the attempts of his friends to restrain him. Mentally, he was in a state of the most raving epileptic mania; violent, noisy, and destructive; perfectly incoherent when suffering from his paroxysms, and unconscious of his actions.

*Progress of case.*—For upwards of twelve months he remained in this state. About every month his fits would come on, and for a week or more he would be perfectly unmanageable, and the terror of the whole establishment, often requiring three and four strong men to be with him to restrain him, as no ordinary room could contain him. Various plans of treatment were adopted and carried out, such as regular packing in the wet sheet, &c., but to no avail until he was put on large doses of digitalis, since when he has gradually lost all his former violence and excitement, and although the fits of epilepsy are nearly as frequent as formerly, nevertheless they are never now accompanied by the former excitement. It was two years ago that he first began the digitalis, and he still takes from one to two drachms daily. His general health seems to be very good. During the summer he improved so greatly that he was employed for some months at the farm. He had, during that time, several epileptic fits, which passed off without the slightest violence. This employment, however, seemed more than he was equal to, and it was discontinued.

**CASE XIX.**—*Acute mania; use of digitalis immediately on admission; freedom from all excitement in twenty-four hours; ultimate recovery.*—W. C., No. 1013, male, æt. 43 years, married. Admitted at Hayward's Heath, October 21st, 1865.

*Previous history.*—Never very strong minded, but always industrious, sober, and steady. Holds an office in a County Book Association, for which he travels, and it was when he was out on his travels that he became insane; the first sign of insanity being his suddenly declaring that he had been

charged with rape. This was only four days ago, and since then he has been in a state of raving mania.

*State on admission*.—Mentally, he is excitable and restless; rushes about with queer, impulsive gestures. Has auditory delusions, fancying that he hears people shouting at him, and threatening him with murder. Asserts that his neighbours have been annoying him lately by shooting with pop-guns at him, &c. Memory good, and he is at times, for short intervals, quite rational. He is in poor bodily health; thin and feeble. Pulse 100, full, but easily compressed.

October 22nd.—A restless night; excited this morning; says he sees his children tied up to the trees on the grounds, and hears them calling to him; is constantly walking restlessly about. Is to have 3ss of the sedative mixture three times a day, and three glasses of whisky.

23rd.—Was placed in a single room last night, and slept for seven hours. He is now quiet, calm, and free from delusion. Takes his food well.

28th.—The medicine was reduced by one half yesterday, but there being this morning a slight tendency to a return of the excitement, he has gone back to the original dose.

November 10th.—Has remained perfectly calm and rational since the last entry, and works in the shoemakers' shop regularly. Will be shortly discharged recovered.

A perusal of these cases will show that digitalis appears to have a marked power of arresting cerebral excitement, whether it be the harmless, incoherent excitement of the acute maniac, the noisy restlessness of the chronic maniac, or the dangerous, violent excitement of the epileptic. It is also evident that, except so far as allaying excitement is beneficial, it has no further curative powers. It will not, it is true, make an insane man sane, but it will do what is next best—it will turn a house of noise into a house of comparative quiet, and so furnish one of the most necessary desiderata in the curative treatment of lunacy.

This power of digitalis to allay excitement must be due, in general paresis, as Dr. Robertson points out, and probably also in acute mania, to its tendency "to steady the pulse, and thus apparently to supply the brain better with blood, and so to obviate the tendency then existing to effusion of serum consequent on the inflammatory action going on." In chronic mania and epilepsy, however, it must simply be due to the fact that digitalis, by lessening the heart's action, diminishes the flow of blood to the brain, and thus offers less food for the excitement to feed on.

This view is rendered more probable from the fact that in these cases digitalis never exerts any beneficial influence until after the pulse has been affected, and that those patients whose pulses are least affected, they are the cases in which digitalis exercises least benefit. Moreover, I have often remarked that, when the system becomes used to the potency of the drug, the subsequent return of the pulse to its former standard is accompanied by a corresponding exacerbation of excitement which can only be allayed by increasing the dose.

In prescribing digitalis one would suppose that only strong, healthy constitutions would be able to stand its power, and that to give it to a person much enfeebled would be only to hasten his death. Yet this view undoubtedly is a wrong one. Patients weakened by disease or exhausted by excitement, as a rule, bear its administration better than those stronger. How otherwise could it be that it has so powerful an effect in general paresis, a disease essentially of debility? Dr. Handfield Jones, at page 343 of his work on 'Functional Nervous Disorders,' relates the case of a woman, reported by Dr. Wilks in the 'Medical Times and Gazette,' who, having been long suffering from disease of the heart, had a severe flooding after labour. She was apparently in *articulo mortis*. Her limbs were cold, face livid, no pulse at the wrist, and a mere fluttering to be heard when the ear was applied to the region of the heart. The body was covered with a deadly, clammy sweat. Brandy and ether had failed, but 3ss doses of Tinc. Digitalis every hour restored her, after seven had been given, and she recovered.

The same author (Dr. H. Jones) reports two as remarkable cases in the 'Medical Times and Gazette' for 13th December, 1862.

The only way by which this action of digitalis can be explained is by admitting that it is a stimulant to the action of the heart, but that if this stimulation be carried too far it results in tonic spasm, owing to excessive stimulation; and it would, of course, require a larger quantity of the drug to attain the point of spasm in a heart weakened by exhaustion than by one already properly stimulated to normal working order by its natural healthy stimulus. The experiments of Mr. Lister tend to confirm this view. Thus he found that on irritation of the vagus nerve in a healthy constitution at first the heart's action was increased and strengthened, but that if the irritation were carried beyond a certain point the reverse is obtained, and the heart's action gradually lost strength and frequency. Furthermore, that if the vagus were irritated in a weakened constitution a stronger galvanic stimulus was required to strengthen the heart and finally weaken it than in the former case.

The large doses of digitalis that may be given with impunity in so uniformly asthenic a malady as delirium tremens give point to this belief, which can also be proved by reference to the cases already quoted. Thus it will be seen how quickly the pulse became intermittent in the case of T. N—; but before that intermission there was a marked and decided increase of many beats per minute in the pulse, and yet he was an unusually strong, fine, healthy young man, only just attacked by mental disease. His pulse began to show it was affected after he had taken one drachm of Tinc. Digitalis, by an increase in the excitement, and then, when he had taken three drachms, it was intermittent. In the case of C. A—, and again in that of E. F—, the one an idiot and the other suffering

from acute mania with great physical exhaustion, both had to be plied with the medicine for some days before it had any effect.

Dr. Robertson advises the use of doses varying from  $3ss$  to  $3j$  three or four times a day. An excited patient placed under such treatment in all probability for the first few hours becomes more excited even than he was before ; but if the medicine be persevered with, after a longer or shorter period, as the case may be, it will be found that the excitement subsides, and that the pulse becomes intermittent. The intermission in all probability is not regular, and in many cases only occurs once perhaps in sixty beats ; in others it is very regular, and occurs every few beats. As soon as this state of the pulse is observed the medicine should be omitted until the pulse has resumed its normal rhythm. This period varies in different constitutions ; in some the altered state of the circulation may last for days, in others only for a few hours.

Some few patients are much benefited by taking small doses, such as  $mx$ , three times a day for many months : but, as a rule, it seems advisable, except in the case of epileptics, simply to give the drug whilst excitement lasts, and then to reserve its power until the next attack appears imminent. As regards epileptics, digitalis seems to possess a certain amount of preventive power, and to be able, as in the case of H. H—, not only to ward off the attacks of violence, but also to lessen their fury when they take place. This patient has been taking as much as  $3ss$  twice daily for many months, and with what marked benefit I have myself been able to observe, as one of his epileptic relapses has just passed off without the slightest manifestation of violence.

In some few cases vomiting and a tendency to syncope attend the intermittent pulse ; but if the medicine be omitted immediately the pulse shortly recovers its tone, and these unpleasant symptoms may thus in the generality of cases be avoided. Purging is said sometimes to occur on the use of large doses, but I have never seen it, and I can find no record of such in any of the cases at Hayward's Heath. Diuresis is a frequent, but not necessarily constant, attendant on the administration of digitalis ; it is certainly more apt to occur in weak than in strong constitutions, which fact gives strength to the theory that digitalis is a stimulator, not a depressant.

In some cases where digitalis has after a time lost its power, or where it has caused sickness and vomiting, Dr. Robertson prescribes the following mixture,\* which, as far as my experience of it yet goes, is often of marked service :—

\* This mixture is prepared by Messrs Taylor, of Vere Street, London, and supplied to the Asylum at Hayward's Heath at the cheap rate of three shillings per pint. The dose is from  $3ss$  to  $3j$ .

R. Tinct. Digitalis,  $\text{m}\text{xxv}$ ;  
 Morphiæ,  $\frac{1}{2}$  gr.;  
 Tinct. Hydrocyan.,  $\text{m}\text{v}$ ;  
 Äther Chloric.,  $\text{m}\text{xxx}$ . M. Ft. hst. *Half for a dose.*

All writers on digitalis are agreed that it has a peculiar influence on the action of the heart; but what is the nature of this power, whether it be a stimulant or depressant, is the point at issue. Yet a third party hold that it is a stimulant in small doses and a depressant in large ones.

The weight of evidence, however, goes to prove that it is a decided stimulant, not only in small but in large doses, and that the facts of the intermittent pulse and enfeebled circulation are accounted for by supposing them to be due to tonic spasm of the muscular fibres of the heart. This view of the case is decidedly supported by Dr. Handfield Jones, and is also advocated in the last number of the ‘Psychiatrie,’ in a review of Ruchblecke, *auf den Gebranch der Narcotica in der Psychiatrie.*

Dr. Handfield Jones, in the ‘British Medical Journal’ for August 23rd, 1862, relates a series of experiments he conducted, and in which he invariably found that, after death from digitalis, the left ventricle was more or less firmly closed. The same author also relates, from Schmidt’s ‘Jahrbücher,’ how Traube, having divided the vagi nerves in a dog, and adjusted a dynamometer to an artery, injected digitalis into the jugular vein, and that in the first place the column of mercury rose and then fell. This experiment clearly proves that the chief part of the nervous system affected seems to be the sympathetic, and apparently the same conclusion is borne out by practice. Indeed, digitalis appears to have little or no influence over the encephalon, its power being chiefly confined to the sympathetic. Dr. Carpenter is of opinion that the “only centre of nervous power to which the maintenance of the heart’s action can be attributed, are the membrous ganglia forming part of the sympathetic system which are found in the organ itself, and by allowing that digitalis stimulates the sympathetic nerves, we have the rationale of its action clearly proved at once. All power it possesses in controlling cerebral excitement being due not to any specific action on the cerebral centres, but to its power of exciting the sympathetic nerves to exercise their power over the heart’s rhythm, by which the supply of blood to the brain is lessened.”

As regards the intermitting pulse, may it not be explained in the following way?

Dr. Carpenter most strongly favours the view that the rhythmical movements of the heart are due to an expression of the peculiar vital endowments of the muscular tissue; and starting with the belief that the contractility of the muscle is due, on the application of a stimulus, “to an exercise of vital force engendered by previous acts

of nutrition," he argues that "as a Leyden jar may be so charged with electricity as to discharge itself spontaneously, so is it easy to conceive that a muscle may be so charged with mobility (or motor power) as to execute "spontaneous contractions;" and in support of this doctrine he brings forward the phenomena of cramp and spasm; and he adds, "It is not very difficult, then, to conceive that the ordinary rhythmical movements of the heart may be due to a simple excess of this mobility, which is continually being supplied by the nutritive operations, and is as continually discharging itself in contractile action." If such be the case, may we not infer that when the heart's action has been lessened by the influence of digitalis on the sympathetic nervous system the blood necessarily courses less rapidly through the various coronary arteries, and, consequently, less nutritive material is stored up; therefore the muscular structures of the heart, not being charged with mobility sufficient to form the requisite stimulus, the rhythm is broken; but by the time a second contraction should take place sufficient, and more than sufficient mobility has been produced, to enable the rhythm to be resumed, as is shown by the powerful contraction that invariably follows an intermission. Diuresis has been mentioned as a frequent effect of the use of digitalis. This, however, soon passes off, not lasting after the circulation is lowered; and it is always more marked in asthenic than in sthenic constitutions. It may be explained by supposing that more blood being at first forced through the kidneys owing to the heart's action being stimulated to increased force, the functions of the kidneys are brought into greater activity; but that when the heart's action becomes slower the reverse takes place, and the kidneys resume their normal action. That the diuretic property of digitalis is more marked in a weakened constitution may in the same way be accounted for by inferring that, inasmuch as it has been shown that digitalis takes longer in affecting the pulse in weak than in strong people, therefore the stimulating effect on the kidneys is kept up longer in the former than in the latter.

That after long-continued doses patients become pale and weak and exhausted may all, of course, be accounted for by the diminution in the force of the circulation, occasioned, in part, as has already been shown, by tonic spasm of the heart, and also, perhaps, because the vaso-motor nerves may possibly be affected through the centres of the sympathetic system, and, of course, the effect on them would be the same as on the heart, namely, at first to aid the pulse by adding greater power to the muscular coats of the arteries, and then to impede the progress of the blood by firmly contracting.

This view appears to be warranted by the various conditions of the pulse during the administration of digitalis: thus in the first place the pulse is, as a rule, increased in frequency and in power, but not in volume; then afterwards the volume gradually decreases,

and at last leaves the pulse very small, slow, and hard, feeling like a whipcord under the touch.

The fact also that digitalis lessens the frequency of respiration may also be accounted for by the diminution in the volume and frequency of the supply of the blood to the nervous and respiratory centres, and does not at all necessarily infer that digitalis exercises any special influence, either on the spinal cord or the medulla oblongata.

### *Conclusions.*

From the history of the foregoing cases it may be presumed,—

1. That digitalis is a valuable sedative in the treatment alike of recent and chronic mania, and when those forms of disease are complicated with general paresis and with epilepsy.
2. That the average dose of the tincture is from 3ss to 3j, and that this quantity may be certainly given for several days with impunity, and subsequently—adjusted to the state of the pulse—may be advantageously used for many months.
3. That the indication by which the use of this drug is regulated is the state of the pulse, any marked intermittence requiring its immediate discontinuance.
4. That the weakness of the circulation is no indication against its employment; on the contrary, experience shows that the most enfeebled subjects bear its administration as well as the most robust.
5. That when sickness and a tendency to syncope follows the use of digitalis, without at the same time a corresponding abatement of the excitement, a combination of the drug with chloric aether, morphia, and hydrocyanic acid, in some such proportions as those above given, often produce the desired results, which the digitalis alone has failed to obtain.

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### PART II.—REVIEWS.

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THE Editors, desirous not to interrupt the continuity of Dr. Bastian's interesting Paper by dividing its publication, have been compelled to defer a critical notice of Professor Parkes' great work on *Hygiène* until the April number.

**PART III.—QUARTERLY REPORT ON THE PROGRESS  
OF PSYCHOLOGICAL MEDICINE.**

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**I.—*German Psychological Literature.***

By J. T. ARLIDGE, A.B. and M.B., Lond., M.R.C.P. Lond.  
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SINCE our last notice of German writings on psychiatry, journals, year-books, and pamphlets, from the prolific Teuton press have so multiplied upon our bookshelves, that an abstract of the principal teachings of each is rendered impossible, consequently a selection must be made of topics which possess the highest interest and importance. We shall, however, give the titles of most at least of the original memoirs and papers in our possession.

Dr. August Droste is the industrious editor of the ‘Medizinische Ahrenlese,’ *Anglicè*, ‘Medical Gleanings,’ a Hanoverian medical journal, published monthly, at Osnabrück. He has been obliging enough to send us several brochures on the Gheel Asylum, with our exchange copy of his journal, which it appears has been in circulation ten years. In its pages asylum matters occupy a prominent place, but it is the colony system of Gheel which rouses him into enthusiasm, and makes him the Mundy of the Hanoverian kingdom. His pamphlets on this system, entitled, ‘The Paradise of the Insane,’ ‘The Curative Treatment of Insanity,’ and ‘The most Natural and Rational Treatment of the Insane,’ present a flattering view of Gheel and its management, derived from prolonged personal observation, and supported by notes of cases. The numbers of his journal for March and August last are occupied with additional remarks on that place, from which we learn of progressive improvements effected by Dr. Bulckens, calculated to obviate some of the defects pointed out by criticising medical visitors. Dr. Bulckens has four assistant-physicians and one surgeon to aid him in the medical supervision of the colony, together with four superintendents, one for each of the sections into which the population is divided. In the course of ten years, two cases of pregnancy had occurred, and five suicides; the insane population amounting to 986, 482 males and 504 females. Of 1339 patients received, Dr. Bulckens classed 436 as curable, and witnessed recovery in 302 of these, or in somewhat above 69 per cent.

One of Dr. Droste's latest pamphlets consists of a translation of Briere-de-Boismont's paper on the characteristics of the writing, and the nature of written productions, of the insane. This little undertaking, it seems, however, could not be submitted to this bleak world alone, but must be accompanied by a disquisition upon Gheel as an appendix.

*Medizinische Jahrbücher.*—Many of the numbers of this Vienna year-book of medicine contain a retrospect of the progress of psychological medicine, written by Dr. Schlager. The first part for 1864 is occupied with an analysis of Dr. Güntz's able paper on 'The Pathology of the Cerebral Vessels in the Insane,' which appeared in the 'Zeitschrift für Psychiatrie,' vol. xx, 1863, and will presently be examined. In the fourth part is a notice of recent works on alterations and on the localization of the faculty of speech, and on loss of speech. On the subject last named it is the essay of Aubertin that is analysed. This author contends that the faculty of speech is located in a special portion of the brain. The faculty of articulate speech must not be confounded with the general power of speech; for either of these may be lost whilst the other is unaffected. Moreover, there are three distinct phenomena in the act of speaking:—1. The faculty of finding words to express ideas. 2. The faculty to remember them; and the power of co-ordinating the movements essential to articulation. Speech also exists both as an internal phenomenon, and as an external one, dependent on a dynamical apparatus, and manifested in the form of language. There are, therefore, organs for the combination and articulation of sounds—the larynx, tongue, lips, &c.; an internal organ, that gives origin and existence to the words with which the faculty of memory is associated, and which co-ordinates the requisite movements for the articulation of words; and, 3. A medium of communication between the articulating apparatus and the acting nerve centre. Consequently, articulate speech may suffer in three ways:—1. By lesion of the articulating organs; 2, by that of the medium of communication; and 3, by lesion of the cerebral centre whereon the co-ordination of the movements necessary to speech is dependent. The last-named faculty Aubertin asserts to exist in the anterior cerebral lobes; an assertion he makes from pathological research.

The special nature of the symptoms, he adds, do not depend upon that of the lesion producing them, which may be indifferently a scirrhouss or cartilaginous tumour, an apoplectic or purulent collection, or a foreign body introduced from without, or even a lesion of a more superficial character, as, for instance, an adhesion of the membranes with some destruction of the subjacent cortical matter. However, a deeply penetrating lesion gives rise to more complete aphemia, whilst a superficial one embarrasses the speech by ataxia locomotrix,

affecting the muscles of articulation. But there are cases of impediment and of loss of speech, wherein no alterations of the anterior cerebral lobes are discoverable; such are attributable to a lesion of the pons varolii, of the olivary bodies, or of the corpora mammillaria, or of organs in the vicinity of which the hypo-glossal and glosso-pharyngeal nerves take their rise. In diseases of this kind, the paralysis of the tongue may be the cause of the difficulty of speech. A lesion of the anterior cerebral lobes may not invariably be attended by loss of speech; yet, indeed, whenever the speech is abolished, and the integrity of all the other faculties remains entire, a more or less extensive lesion of those lobes is to be looked for. If this lesion, in course of time, extends itself so as to involve the corpora striata, the fornix, &c., then, as a natural consequence, the paralytic phenomena are increased. Patients rendered speechless, for the most part suddenly, reply correctly in writing to questions, and possess their intelligence unimpaired. Simple pressure upon the anterior lobes of the brain will of itself cause impairment of speech. Some cases seem to point to the second and third frontal convolutions as the centre of the faculty of speech; yet this faculty is not restricted within any such circumscribed portion of the brain, for the lesions associated with aphemia are met with at several parts of the frontal lobes; moreover, it appears that the organ of articulate speech exists, not in both anterior cerebral lobes, but only in the left one.

*Mental derangement during pregnancy and after child-birth* is the subject of an essay by Arnold von Franque ('Wurzburger Medizinisch Zeitschrift,' 1863). He remarks on the rarity of pregnancy among the assigned causes of insanity. Gräser noted in the course of ten years' practice, in the asylums of Eberbach and Eichberg, only four cases attributed to pregnancy among 383 women under treatment. When mental disorder does exhibit itself, it is usually about the end of the third or the beginning of the fourth month, and presents the characters of melancholia rather than of mania. Griesinger has sought an explanation of its occurrence in the changes in the circulation induced by the pregnant state; but Franque would assign more importance to an anaemic state and disordered nutrition, associated with a nervous constitution and psychical causes of disturbance. He also regards the prognosis of these cases as at best doubtful, and mostly unfavorable, and finds delivery to have in general no influence upon their course.

Moreover, when insane females become pregnant, the pregnancy follows its natural course, and exercises usually no perceptible influence upon the mental disorder; although instances do now and then occur of a modification of the malady. The improvement appearing, however, in any such cases is not lasting, but vanishes after delivery, when the insanity usually advances more rapidly towards

an unfavorable termination, and exchanges its melancholic for the maniacal type. This variation in form transpires also mostly in the few cases in which recovery occurs.

No special treatment is applicable to these cases of pregnancy with insanity. The treatment by inducing abortion, where attempted, has been followed by ill results.

Franque met with nine cases out of 427, in which child-birth was the cause of insanity. Amongst its exciting causes he enumerates prolonged and difficult labour, great loss of blood, convulsions, and albuminuria. Those of a psychical character are, anxiety, fear, poverty, sorrow, jealousy, the feeling of shame and disgrace. Simpson attributes all acute cases to albuminuria. Predisposition to insanity exercises a powerful influence. Gunding states that half the cases are relapses. Most occur betwixt the ages of thirty and thirty-five. The tendency to mental disorder increases in proportion to the number of pregnancies, for frequent child-bearing is a cause of vascular and nervous exhaustion, that is, of those conditions favorable to the production of insanity. Among fifty-six cases, only eighteen were primiparæ.

The outbreak of puerperal insanity varies in time between four or five days to three or four weeks after confinement; but it is not uncommon for patients to previously complain of headache and loss of sleep, and to exhibit unusual irritability. The lochia also decrease greatly, or altogether cease. The mental disturbance is in general of a maniacal type, especially when it supervenes soon after delivery. When the attack is postponed, then mania gives place rather more frequently to melancholia. Erotic and impulsive phenomena predominate in the maniacal variety, and a suicidal tendency in the melancholic. Hallucinations of hearing are the most frequent. The prognosis is generally not unfavorable; it is less so in the maniacal than in the melancholic form; and, as a rule, recovery is more speedy, easier, and more frequent in subsequent attacks than in the first.

The treatment pursued by Franque resembles that in common use, viz., the employment of sedatives and tonics, with nourishing food, quiet, and good nursing.

The fourth part of the 'Jahrbucher' contains a detailed history of a case of atrophy of the pons varolii and cerebellum, and some examples of syphilitic disease of the brain; and in the report on nervous maladies, numerous brief reports of various cerebral lesions, collected by Dr. Duchek.

*Archiv der Deutschen Gesellschaft für Psychiatrie*, is edited by Dr. Erlenmayer. The volume for 1863 contains three essays, one by the editor, consisting of a notice of the public and private lunatic and idiot asylums of the several states of Europe; one by Dr. Wille,

entitled "An Attempt to Establish a Physio-pathological Basis and Classification of Mental Disorders;" the third by Dr. Santlus, on the "Psychology of Human Instincts." In the volume for 1864 (vol. vii) are original articles by Dr. Wille, "On the Asylum for Upper Bavaria, near Munich;" by Dr. Santlus, "On the Psychical Consequences of Injuries of the Head;" by Dr. Schramm, "On Hydrophobia in Ancient Times," and by Dr. Kelp, "A Report of the mixed Asylum at Wehnen, in Oldenberg."

Besides the original articles named, the seventh volume contains copies, notices, and abstracts from the principal journals devoted to psychological medicine, published in the several countries of Europe. Among others, the 'Journal of Mental Science' is included, and twenty pages devoted to an abstract of the contents of the volume for 1862; our memoranda from French works being in a great measure transferred to its pages. This very full notice of our labours we are indebted for to Dr. Strahl, of Kreuznach. Among other interesting notices is that of the three Danish Asylums of North Jutland (near Aarhuus), Schleswig, and Bidstrup, accompanied by numerous statistical tables. There is also a detailed case of mania, copied from the 'Transactions of the Medical Society of Christiania,' in which the "cold-water cure" was successfully used.

Dr. Wille, in his pathological paper, contends for the existence of an organic change or process in the brain, in all cases of mental diseases. The predisposition to insanity is itself dependent upon a peculiar condition of the brain and nervous system. That definite alterations in the brain substance have not been detected in so many cases where cerebral derangement has existed, he attributes to defective examination, and especially to the neglect of, and the as yet imperfect acquaintance with, the microscope in nerve histology. Besides, even the phenomena of irritation in other tissues are not referable to appreciable and definite organic alterations, though such alterations are presumed to be present.

As augmentation and diminution of function constitute the basis of a division of nervous diseases in general, so the same may be employed in framing a classification of psychical maladies. The one or other alteration of function may be more or less complete, just as bodily paralysis may be; and like the latter may be dependent on removable and also on eccentric causes. Moreover, tangible structural changes may be the consequence either of severe or of long-continued disorder, and secondary mental disturbance may be the result. These last are divisible into those with debility and those with paralysis; the former marked by impairment, the latter by destruction of function. Further, as nervous diseases are distinguishable into idiopathic and reflex, so also are mental disorders (as Van der Kolk has pointed out), either the brain itself being primarily diseased, or

disease in another organ operates by and through the brain; or, to use Flemming's nomenclature, mental disorders may be protopathic or deuteropathic, viewed with reference to their causation. The "mixed psychoses" of this writer are unsupported by experience.

In deuteropathic disorders the cerebral affection may be primarily dependent upon the interposition of another disease. This interposition may be brought about by—(a) a primary disease of the brain; (b) by similar disease of the medulla oblongata and spinal cord; (c) by diseases of the peripheral nerves, whether of the senses, or of sensation, or of motion; (d) or by the medium of the ganglionic nervous system. The causes of disease may also reside in the blood, (a) being abnormal in quality; (b) or otherwise in quantity.

In protopathic mental disorders, the intellect and judgment suffer; the middle portions of the brain are involved and the harmony of their functions disturbed, either by way of excess or of defect. The characteristic symptoms are referrible to a derangement of all the psychical factors; that of no one of them particularly predominating, beyond what is explicable from the natural mental constitution of the individual. It is otherwise with regard to deuteropathic insanity. A diseased state always precedes, which, by reason of its duration, affects the cerebral functions, either stimulating or restraining them, and gradually develops psychical disturbance. The derangements of sensation induced by local foci of irritation have their character determined by the situation of the latter, to a greater or less extent, and these, by their continuance, convert irritation into structural alteration or disease.

Primary mental disorders are distinguishable into—(a) those with increased functional activity, and (b) those with impeded. But functional power may besides be weakened or paralysed, either in connection with primary or secondary mental disturbance. These conclusions may be thus expressed in a tabular form:

#### DIV. I.—Primary Mental Disorders.

- Genus*—*a.* Diseases with augmented psychical function.  
*b.* Diseases with impeded function.

Each of these genera is divisible into two species, according as the morbid process is—1, protopathic, or, 2, deuteropathic.

- c.* Psychical debility.  
*d.* Psychical paralytic states.

#### DIV. II.—Secondary Mental Disorders.

- Genus*—*a.* Psychical debility.  
*b.* Psychical paralytic states.

A certain definite amount of psychical activity, dependent on a proportionate amount of cerebral excitation, is necessary to normal psychical life. Excitation of the brain, and equally of the nerves

bears to the activity or inertness of the psychical functions and psychical life the same relation as too much or too little nutrient material does to animal life. Further, nutrition of the brain is of a twofold nature. On the one hand it requires blood, like all other corporeal organs, whilst, on the other, it wants psychical food, that is, excitation by the medium of the senses and of sensitive nerves. A third factor in brain-life is the original inborn irritability of the brain and nervous system, together with the natural condition of all other organs of the body, which are all concerned in that of the cerebral nutrition, and it follows that alterations in these factors are productive of alterations in psychical function. Thus, as hyperæsthesia follows nerve excitation, so will abnormal irritability of the brain be followed by analogous consequences. Again, as the expression of exalted sensation is, on one side, pain and reflex action, and, on the other, convulsions, so the same phenomena transpire in cerebral affections, those of a reflex nature being still more varied, though restricted to the sphere of psychical life. Such phenomena have been collectively included within the expression of "exalted brain function."

A state of exalted brain function and psychical processes is exemplified in mania, which may be of two kinds, protopathic and deutero-pathic, according to the origin and situation of the exciting cause. Many of its conjoined phenomena depend upon individual congenital peculiarities affecting the constitution, the physical development, &c. of patients. Dr. Willes assigns as products of exalted cerebral activity not only acute and chronic mania, but also monomania, and moral insanity, and general paralysis.

In melancholia, on the contrary, he discovers evidences of impeded or arrested brain-function, and distinguishes three varieties; viz., 1, melancholia with stupor; 2, melancholia activa, or agitans; and 3, melancholic monomania with delusions of persecution.

Exaltation of function is of a double character, analogous to the physio-pathological conditions which constitute the substratum of clonic and tonic convulsions; there are, likewise, distinguishable a *clonismus* and a *tonismus* of the brain and nervous system, and two different series of morbid processes associated with them. These morbid processes may gradually develop and display themselves and as gradually progress, or they may break out suddenly and continue active; consequently, an acute and a chronic clonismus and tonismus may be predicated of the brain and nervous system. Again, these morbid processes may directly originate in the cerebrum, and thence propagate themselves to the entire nervous system, or, on the contrary, they may become active in the brain by the medium of another disease. Hence the division into protopathic and deutero-pathic mental disorders.

Prolonged functional exaltation of the brain and nervous system must, in part by exhaustion, in part by morbid results following

excitation, induce a weakened state of brain and nervous system, which by its continuance leads to a condition akin to paralysis. On the other hand, paralytic conditions may follow upon disease originating otherwise than from over-action of the brain and nerves. Such states are regarded as primary, being correlative with the functional disturbances; whilst those following upon the previous existence of mental disorder, are secondary in nature. Dr. Willes proposes the following classification :

#### A. PRIMARY MENTAL DISORDERS.

*a. Clonismus* of the brain and nervous system with psychical symptoms of mania : psychical exaltation.

Appearing as—

1. Acute mania.
2. Chronic mania.

*b. Tonismus* of the brain and nervous system with psychical symptoms of melancholia, psychical interruption or impediment.

Appearing as—

1. Acute melancholia; melancholia with stupor; melancholia activa.
2. Chronic melancholia.

These two primary forms are further divisible according to their pathogenesis.

- a.* Protopathic, idiopathic.
- β.* Deuteropathic (symptomatic, sympathetic).
- γ.* Psychical debility.
- δ.* Psychical paralysis (primary apathic dementia).

#### B. SECONDARY MENTAL DISORDERS.

*a.* Secondary conditions of weakness.

1. Secondary mania ; mania with weakness ; monomania with dementia.

2. Secondary melancholia ; melancholia with weakness ; melancholia apathica, and melancholic monomania.

3. Psychical weakness without distinct reaction ; secondary apathic dementia.

*b.* Secondary paralytic conditions.

1. Paralysis with psychical reaction ; active dementia.
2. Ordinary psychical paralysis.

Distinguished according to their course, mental disorders are :

Continuous ; remittent ; periodic or intermittent.

The last variety presents periods of complete lucidity. According to the changes in the diseased process, mental disorders are also distinguishable as mixed, or circular ; one form being either intercurrent with another or with lucid intervals.

Lastly, according to the circumstances of their appearance mental disorders are either epidemic or endemic.

The essay by Dr. Santlus on "*the psychical consequences of injuries of the head, especially of lesions of the anterior cerebral lobes and the defects of speech caused thereby,*" is chiefly occupied with a register of cases. The author first presents the history of eleven cases of cerebral injury. In five of these the frontal bone was injured and blood extravasated beneath, and in four among them was the speech affected; in the fifth, it remained unaffected and the clot lay above the anterior lobe. Among the six remaining cases, the injury was at the posterior part of the head in two and near the vertex in four; but in none was the speech altered.

Besides these eleven, Santlus quotes the records of 291 cases of injury of the head, occurring since 1818 in the Duchy of Nassau, and published in the '*Nassau Medical Year-Book.*' Among these 291 cases, in 88 was the frontal region alone injured; in 27, the frontal and temporal regions; in 134, the parietal and temporal regions; in 105 the parietal alone; in 16, the temporal and occipital; and in 26, the occipital only. And it is remarkable that impairment or loss of speech is recounted as happening, save in one instance, only among those 88 cases in which the frontal region was the seat of injury, and extravasation and other consequences were met with in the anterior lobes of the cerebral hemispheres and beneath them, either over the orbital plates of the frontal or the lesser wings of the sphenoid bone. Moreover, the more restricted the internal lesion is, so much the more prominent are the defects of speech found. The solitary exception to loss of speech accompanying a lesion elsewhere than in the frontal region, was in connection with an injury in the occipital region; but here the effect on the speech was traceable to injury of the ninth nerve. Among the 88 examples of lesion of the anterior lobes, in 17 was the speech affected.

On the other hand, Nasse, in his critique on the hypothesis of the location of the faculty of speech in the anterior cerebral lobes, has collected from various authors instances of disease in those parts without loss of speech, and also examples of lesions elsewhere in the brain accompanied by alterations of speech. It, nevertheless, cannot be denied that at least a frequent coincidence subsists between lesions of the anterior lobes of the brain and defects in the power of speech.

*Der Irrenfreund*, edited by Drs. Koster, Brosius, and Betz, contains, in the volume for 1864, original articles on demoniacal possession; on fanaticism and enthusiasm as causes of insanity; on dementia, partial and general; a mistaken case of insanity; on pregnancy and delivery in relation to mental disorder; on the medicinal treatment of the insane; on an endemic madness in Frankfort, in 1859, among young women; on Revivalism, and on muscular action among the insane. Besides these articles, there

are several brief communications, and also extracts from other Journals.

The paper on pregnancy and insanity is by Dr. Franque, and is a repetition of what appeared in the 'Wurzburg Gazette,' and which has been analysed by us in the present paper (p. 574). The article on the medicinal treatment of insanity is by Dr. Brosius. Its teaching is, that medicines can be administered in that disorder upon no general and rational principles, inasmuch as the ultimate structural causes, to be sought in the brain, are unknown, and no necessary connection can be predicated between the mental phenomena and any cerebral changes. He argues that opium cannot be regarded as a curative agent in general in mental disorder, because neither recovery nor improvement does generally, and as a matter of course, follow its use. During 1863, he gave drugs in only two out of twenty curable cases admitted into his asylum. One of these was a case of mania with chronic alcoholism, in which opium produced quiet and was followed by recovery; the other case was that of a melancholic female, who exhibited exacerbations of excitement in the morning, followed by remissions in the afternoon, and who derived benefit from quinine.

This same physician is the author of the paper on Revivalism. It is founded upon the memoirs published in this country respecting the revival movement in Ireland in 1859, and preceded by a notice of the origin of Wesleyan Methodism. It offers no matter for extract; at the same time its historical memoranda require revision.

*On muscular action among the Insane*, is the subject of a more considerable essay by Dr. Brosius. Anomalies of motion proceed from two sources; the one being some lesion in the cerebro-spinal system associated with the insanity; the other the result of the abnormal perception, or of the disordered will. The consequences originating from the latter source are manifold, and the muscular movements will best be considered in relation to their characteristics, the motor organs themselves being assumed to be sound.

The anomalies and peculiarities of the movements of the insane are valuable symptoms in themselves. They often indicate psychical disturbance where the speech does not betray it; they assist the judgment in determining on the probable curability of a case, or on the simulation of insanity, &c., and they not unfrequently aid in diagnosing the anatomical conditions existing. The muscles acting either in the organs of speech or in locomotion, are the only vehicles of communication between the mind of the individual and the outer world. Insanity attended by augmented muscular movement is called excitement; that by diminished, depression.

Muscular over-activity is a characteristic of mania; witnessed as the voluntary phenomenon of an over-excited brain, and also, at

times, as an involuntary condition in the form of slight convulsive movements, twitchings of tendons and tremors of muscles, as well of the limbs as of the face. And it is desirable to notice whether such involuntary movements are present only during the paroxysms of excitement, or also during the remissions ; for, in the latter case, they raise the suspicion of cerebral lesion. For instance, they are, as a rule, present in the calm intervals met with during the violent excitement with which the general paralysis of the insane usually commences. Moreover, during periods of mental exaltation, a state of ecstasy now and then occurs, varying both in intensity and in duration. The very active, restless, and talkative patient becomes all at once motionless and silent, and assumes a fixed attitude and an indifference to circumstances around him.

In states of depression the movements are usually languid, and the flexor muscles are less thrown into activity. The patient's longing is for rest and solitude. This depression is seen both in melancholia and dementia, but, in the latter, the positive mental state of anguish and despondency is replaced by indifference and inertia of mind. In the case of the melancholic, the countenance is shrunken, the features concentrated, and the whole manner, movements, and carriage of the sufferer exhibit the state of mind, even when speech fails to betray it. On the other hand, in the case of the demented, the face expresses no active emotion ; its muscles are relaxed, the eyelids fall, the mouth is half open, and the knees bent in standing and walking, and a meaningless laugh is often indulged in ; where the movements are not restricted, but active, the activity displayed has no object. In advanced cases of dementia, many of the reflex movements are lost ; the saliva is not swallowed, but drivels from the mouth, and the orbicularis is inactive even when the face is upturned to the sun. Certain attitudes and movements become stereotyped, having ceased to be expressive of any antecedent fancies, in other words, they are automatic and matters of indifference. Indeed, it is often possible to form both a diagnosis and prognosis from the gestures and movements without the aid of a verbal examination.

In melancholic depression, again, there is a loss of vigour in the muscles of organic life ; the respiration is shallow and slow, though broken by deep sighs ; the cardiac action is weak ; peristaltic action languid, with constipation ; assimilation feeble, and appetite bad, accompanied by wasting. On the contrary, the demented usually gain in flesh.

In certain cases of melancholia, however, there is a temporary increase of muscular activity, with restlessness and agitation, whence the term *melancholia activa* assigned to it. But these features of excitement, together with the volubility of tongue, cries, screams, destructive acts, &c., differ in various points from those of mania. In the latter disorder, the movements are more varied in form, cha-

racter and intensity, and, so to speak, change every moment, whilst the grimaces, talk, and noise, indicate the mental confusion existing. The motor activity is made to display the self-esteem, and, in general, the exaggerated feelings of the patient, and gives no place to weariness. On the contrary, the muscular excitement of the melancholic has a more uniform character, both in kind, degree, and duration, and is expressive of a fixed mental state. The crying, moaning, screaming, sighing, &c., persist without variation from morning to evening, and from one day to the next, and the gestures, carriage and movements which proclaim the mental anguish and terror, are limited to a narrow circle of changes.

The highest degree of passive melancholia met with is the form known as *melancholia attonita*, or *mecum stupore*. It exhibits an extreme state of inactivity and inertness, in which sensorial and sensible impressions induce no response from the motor organs, and fail to stimulate the faculty of speech. This stupor and torpor are the true characteristics of this form of insanity, for the indications of terror, or the melancholic signs, are not unfrequently wanting. In many so afflicted, the muscles are lax, and the joints may be flexed or extended at will, whilst in others the limb which is put in any position retains it, the muscles becoming tense and rigid, the mouth tightly closed and the chin bent firmly towards the chest; in short, there is a cataleptic condition.

The state of muscular torpor is often found to disappear when the patient is left to himself, and believes himself unobserved; but reappears with the rigidity and statue-like stillness when his quiet is interrupted. Moreover, at other times, the laxity of the muscles gives place to rigidity, and *vice versa*.

The author proceeds, in a subsequent communication, to consider the altered movements and modified muscular action in other mental conditions, particularly in epilepsy and in the paralysis of the insane. These have been so largely detailed by other writers that we do not consider it desirable to make an abstract of Dr. Brosius' observations upon them.

Dr. Lewis Meyer, of Hamburg, in a brief paper on "*Hallucinations among the Insane*," published in the 'Central-blatt' (1865, No. 43), contends that these are not simply due to disordered impressions made on the senses, but are connected with something that has been experienced, and that has operated as a cause of the mental disorder. This matter of experience or this circumstance will, almost without exception, be referred to indirectly in the account the patient gives; as, for instance, of his seeing, hearing, or feeling that he is persecuted, insulted, &c. More, rarely such patients repeat a single form of words, and, when they do so, it is in an indirect manner; for example, "This man said, I am a thief;" and but seldom will a suggestive question, when repeated, elicit a straightforward account

or an actual repetition of the same words. The mode of expressing their conceptions varies, and in its want of precision does not in any degree accord with the clearness and vivacity of a sensorial impression. The substance here preponderates over the form of the phenomenon; the latter changes though the mental aberration persists. It often enough happens that the insane themselves are not clear respecting the form of the characteristic circumstance, and show this indistinctness in their remarks; as, for instance, that they have not seen or not heard this or that thing, but have known or have felt it, &c.; hence it is clear, that the circumstance is a matter of conception only, and not of sensation.

The fact that such a relation as pointed out, does obtain, is well seen in hallucinations called forth by external suggestions, as noticed in chronic alcoholism and in hysterical delirium. The patient feels, so to speak, the need of harmonising the circumstances around him with the fancies of his brain. In the same way, the insane appropriate and commingle existing sensorial impressions with their erroneous conceptions. If these views be admitted, there is no natural distinction between illusions and hallucinations.

*"On Vascular Cysts in the Cartilages of the Ear, and their relation to Sanguineous Tumours of the Ear,"* is the subject of another short communication to the same Journal, by Dr. Meyer. He has found a sort of cystic degeneration in the aural cartilages of old people, of paralytics and others, accompanied by the appearance of a surrounding vascular network, and a loosening and breaking down of the cartilage cells. Within the cysts themselves is a fluid containing amorphous, colourless, or brownish granules, of various dimensions, and refracting light strongly. Some of these cysts are visible to the naked eye, whilst others are very minute, and require the microscope to discover them. The vessels of the newly formed network are dilated here and there, much convoluted, and their walls in a state of degeneration, and therefore prone to rupture, and to fill the cyst they surround with blood. In three instances of sanguineous tumours of the ear in which he examined the cartilages, he found widely distended, numerous vessels, immediately adjacent to the effused blood, together with cystic degeneration in neighbouring portions of tissue.

*Correspondenz-Blatt.* The volume for 1864 contains the original papers following:—Eulenbergs, on ‘A case of Simulated Insanity;’ Ameling, ‘Report of Haina Asylum’ (Hesse Cassel); Schramm, on ‘Mental Diseases as portrayed by Cœlius Aurelianus;’ Eulenbergs, ‘Report of a Private Asylum near Cologne;’ Otto, on ‘Dumbness among the Insane;’ Wilhelm, on the ‘Etiology of Melancholia Cataleptica, and on the relation between Mania and Melancholia

Activa;’ Franque, ‘Report on the American Asylums;’ Franque, on ‘Cerebro-spinal Tubercular Meningitis;’ Ullersperger, on ‘Sleep, watching, and mental disorders in relation to cerebral nutrition;’ Voppel, ‘Epidemics of Granular Ophthalmia;’ Berkhan, on ‘Insanity among Children;’ Ullersperger, on ‘Pellagra, and Mental Disorder;’ Passow, on ‘Loss of Speech among the Insane;’ Franque, on ‘The Statistics of the Insane and of Idiots in North America;’ ‘Report on the Reorganization of the Prague Asylum;’ ‘On Light as a therapeutical agent;’ ‘Some rare Cases of Recovery,’ by Dr. Kelp; Erlenmeyer, on ‘Hypodermic Injections;’ Otto, on ‘Psychopathic elementary states in a medico-legal aspect, and on a case of Medullary Cancer of the Sphenoid Bone;’ Kelp, on ‘Latent Pericarditis in Melancholia;’ Maeder, ‘Statistical Report for five years of the Convalescent Asylum at Roda;’ Franque, on ‘General Convulsions among Children from eight to eleven days old;’ Ullersperger, on ‘Spanish Asylums;’ Kelp, on ‘Cataleptic Melancholia;’ Puchstein, on ‘Imbecile Children in Pomerania requiring school discipline;’ Ullersperger, on ‘Intermittent Psychoses.’

In general, these original communications are very brief, and many of them present no points of sufficient interest to abstract, though they have a value, as a whole, in the periodical that gives them insertion. A large proportion simply record cases in illustration of some doctrine of medical psychology, or of cerebral pathology. Franque’s reports on American Asylums, and the statistics of insanity in North America, are not founded on a personal inspection of the asylums, but simply on the official reports annually published by their superintendents. The rare cases of recovery recorded by Dr. Kelp, are those of two patients, inmates of the asylum for four and five years respectively, who regained their sanity after an attack of typhus fever. Most asylum superintendents have witnessed similar remarkable recoveries after severe bodily diseases, such as fevers, erysipelas, &c., among patients regarded as incurable, and many such are noticed in asylum reports.

Erlenmeyer’s memoir on hypodermic injection presents a good summary of the arguments in its favour, of its applicability in various complaints, and of the mode of using it, chiefly drawn from the contributions of British medical men, published in various pamphlets and journals. Ullersperger’s communications on Spanish asylums are occupied by statistical returns of the number of insane in those institutions, and of the form of insanity they suffer, as presented to the Minister of State, by Dr. Pujadas, the General Inspector of Asylums. The total number of lunatics in hospitals and asylums was, in 1859, 2253; in 1860, 2384; and in 1861, 2502. Of the 2253 in 1859, as many as 1375 were males, and the same immense preponderance of the male sex appears in subsequent years. With respect to the form of the mental disorder, 31·97 per cent. suffered

from mania; 11·00 from monomania; 6·00 from melancholia; 20·53 from dementia; 9·15 from imbecility; 11·00 from insanity complicated with epilepsy, and 10·11 from undefined forms. Among the literary notices in the 'Correspondenz-Blatt,' occur one on the Report of the Perth Asylum, one on that of the Richmond (Dublin) Asylum, and a third on the descriptive account of the Sussex Asylum. These notices are merely analytical, and not critical.

*Allgemeine Zeitschrift für Psychiatrie*, Band. xx, Heft. 2, 3, and 4. The original memoirs contained in these several parts of this old established and valuable journal are: 'On the Pathology of the Cerebral Vessels in the Insane,' by Dr. Güntz; 'On Insanity in Solitary Confinement,' by Dr. Roller; 'On Rheumatism and Mental Disorder,' by Dr. Sander; 'On the State of Insanity and of Asylums in Upper Austria,' by Dr. Knörlein; 'Pathological and Physiological Inquiries respecting Progressive Paralytic Dementia,' by Dr. Tigges; and 'On a Physiological Basis for the Classification of Mental Disorders,' by Dr. Otto Müller.

The essay, by Dr. Güntz, 'On the Pathology of the Cerebral Vessels—sinuses, veins and arteries—in the Insane,' is of great value. The author rightly remarks on the prevailing neglect of noting the condition of the blood-vessels of the brain and cranium, although they are liable to various morbid changes that must materially modify the nutrition, and therefore, also, the functions of the brain. He has collected notes of 21 autopsies of insane persons, in which some lesion was found in the sinuses of the head. In 16 of these, there was thrombosis of the cerebral sinuses; in 4 there was either contraction or obstruction in those vessels, and in 1 there was a collection of pus in the left pectoral sinus. Thrombosis was met with 5 times out of the 16, in the superior longitudinal sinus; 5 times, also, in one or the other transverse (lateral) sinus, and twice in the petrosal sinus. The left lateral sinus is more frequently the seat of disease than the right. Thrombosis occurred almost exclusively between the ages of thirty and sixty; and of the 21 cases, 18 were met with in males. The concurrent mental disorder was, in 2 instances, melancholia; in 2, monomania; in 1, maniacal delirium from drink; in 1, general delirium, with hemiplegia; in 5, simple dementia; in 1, dementia with paresis of left side; in 5, dementia with epilepsy; and, in 4, dementia paralytica. From this analysis it is seen that secondary forms of insanity are the most common in connection with the lesions in question.

As to the relative prevalence of thrombosis among the insane, Greding reported 63 instances of clots in the longitudinal sinus among 216 cases, but Güntz's experience does not confirm this statement, for in 500 autopsies he found lesions of the sinuses in only 20.

Caries of the petrous bone, the most common cause of thrombosis of the sinuses, clearly existed in only two cases, and doubtfully in two others. Inflammation of the sinus was the cause of thrombosis in three instances, and of obstruction of the vessel in other three; whilst pyæmia appeared to constitute the basis of the former lesion in two of the remaining cases.

No certain symptoms of the disease of the sinuses can be predicated. Its onset would appear, however, to be often marked by sudden excitement or agitation; with a scream, an apoplectic seizure, succeeded by stupor and coma. Farther complications were encountered; in 6 cases, epilepsy; in 4, general paralysis; and in 3, hemiplegia. Among the instances recorded, thrombosis happened five days before death in 21; one week in 2; five weeks in 12; three weeks in 13; two years in 2; and a greater number of years in 4 cases.

Various other morbid conditions, differing in number and degree, affecting the encephalon and other viscera, existed with thrombosis in the cases collected; but no one of these was a constant accompaniment or stood in any necessary relation with it. Moreover, the thrombosis and other lesions of the cerebral sinuses exhibit no etiological relation to the mental disorder found with them, but are some of them only consequences of constitutional states, and others merely concomitants of other lesions connected with the psychical derangement.

Kasloff asserted that among the insane, especially those of a suicidal tendency, the *foramen lacerum* was commonly contracted, and the jugular vein of the corresponding side much reduced in calibre; but this has been contradicted by Barkow and Harberg, who state that the difference in size between the foramina on the two sides is equally common among the sane. On the other hand, Gunsberg, whilst admitting this inequality to obtain among the sane, supports Kasloff's statement by representing it as more common among the insane, and as of more frequent occurrence on the right than on the left side. Güntz attaches little importance to this condition, believing that the narrowing of one vein will be generally found compensated by greater capacity of another.

One other modification in the vessels of the brain has been mentioned by Kroon. It is that, in several cases of epilepsy, the longitudinal sinus has been found sinuous in its course, and accompanied by an inequality in the two halves of the medulla oblongata.

Compared with thrombosis, other morbid changes in the vessels of the head are rare. Among such is phlebectasis of the *pia mater*. This presents itself in two forms; in one the normal course of the veins is unaltered, but they are uniformly dilated and their walls reduced in thickness; in the other, the veins are lengthened and tortuous as well as expanded. This latter condition has been noted

in several brains of persons insane from intoxication, but is not restricted to that form of insanity. Moreover, the state of phlebectasis appears to be associated with long continued hyperæmia of the pia mater. A number of cases of the lesion in question are adduced in illustration ; one fair deduction from which is, that it occurs mostly in people in the prime of life. On the other hand, it bears no direct etiological relation with insanity.

Alterations in the cerebral arteries are next considered ; and a case of arterial obstruction and deficiency, attended by cerebral atrophy, recorded. Respecting the prevalence of atheromatous deposit in their walls, there is much divergence in the statements of authors. Güntz himself met with it in 60 out of 550 autopsies of the insane. The age of 20 per cent of these 60 was upwards of fifty years. Moreover, it was more frequently encountered in males than in females. As respects the form of mental malady, it appears to be very unusual in cases of depression, and most prevalent in cases of dementia or of imbecility. It prevails in 10 per cent. of the latter class of cases, and in 7 per cent of those exhibiting excitement. It extends, as a rule, to most of the cerebral arteries, and is accompanied with other lesions of the brain and its coverings, particularly with induration and atrophy.

Passing by the records of aneurism of the cerebral arteries, we come to the next section on the alterations of the smaller blood-vessels and capillaries. Although it is but very recently that observations have been directed to such alterations, yet numerous facts have accumulated with regard to them. Anomalies of calibre have been examined by Ekker, Van der Kolk, and others. The former discovered the small arteries and the capillaries of the brain to be widened in three cases of dementia. Van der Kolk noted a similar condition with hyperæmia, and increased thickness of the vascular walls in the medulla oblongata of epileptics. These morbid states were most marked about the roots of the hypoglossal nerves in those epileptics who bit the tongue in the fits, whilst in others they were most seen about the origin of the vagus. The altered vascular condition of the medulla oblongata in epilepsy has had its existence further confirmed by Demme, Kroon, Virchow, and others. The sieve-like appearance of the brain matter mentioned by Calmeil as occurring in mania, is attributable to a like dilatation of the vessels. Durand-Fardel has also noticed the same condition. Dilatation is often accompanied by tortuosity ; and Güntz, who has observed this, adds further, that minute aneurismal expansions may also be seen in the smallest capillaries, projecting from one or from both their sides.

In connection with these changes, Güntz has also noticed that the minute aneurisms are often occupied with fatty granules and a blackish pigment matter, which extend likewise into the capillaries

themselves. The brain matter around the vessels so altered is always soft, its fibres of a pinkish hue, and enlarged by the presence of granular cells, fatty granules, and cholesterine crystals. At times there is capillary apoplexy and pigmentary deposits. Accompanying these minute changes there was in all the cases examined some morbid appearances of the membranes, or of the cerebral mass itself, or of both; and the usual symptoms during life were those of congestion with apoplectic or epileptiform fits, or otherwise those of serious derangement of the cerebral nutrition with paralysis. A tortuous and varicose state of the capillaries has also been described by Brunet and Albers in some cases of mental disease.

Other lesions of vessels to be named are those of the minute arteries of the brain described by Pestalozzi as "false aneurisms." These are found only on the microscopic arteries of the gray lamina and of the corpus striatum. To the naked eye they appear in the form of dark streaks or little elongated blood coagula; but under the microscope they are seen to be bulgings from the arteries, caused by the detachment of their external and adventitious tunic, and to be filled with normal coloured or colourless blood corpuscles, or sometimes with shrunken ones and other bodies approaching exudation-corpuscles in aspect.

Wedl has further described the existence, in cases of general paralysis, of nucleated granular cells (such as are concerned in the formation of connective tissue) in the adventitious or areolar coat of the dilated vessels, which lead to the contraction and ultimate closure of the vessels and the deposition of calcareous matter around them. The calcification of the small arteries of the brain proceeds also, without previous dilatation, and has been principally noticed in the medullary matter. A fatty degeneration, also, of the contractile coat of the arteries is not uncommon, especially where apoplectic effusion has occurred. This condition may be regarded, moreover, as a frequent antecedent to the aneurismal dilatations previously noticed, inasmuch as it seriously lessens the elasticity and resistance of the principal arterial tunic.

The remarkable condition known as pigment emboly of the cortical substance appears to bear no relation with the presence of mental disorder. In cases of the sort, the cortical lamina has a dark, dusky gray colour and diminished consistence. The affected vessels are either entirely filled with pigment, or this occurs in disjoined masses; and the abnormal condition may be confined to a few capillaries, or overspread the vascular network of the gray matter of the encephalon, and at times also of the cord, and occasionally penetrate into the vessels of the medullary substance.

*Rheumatism and Insanity.*—Dr. Sander commences his paper by citing the observations of Griesinger upon this subject. The latter,

in 1860, recorded seven cases of mental disorder which arose during the course of acute rheumatism. In two of them the rheumatism declined upon the appearance of the mental symptoms, but subsequently returned when the latter in their turn vanished. In another case chorea also coexisted. In four cases the rheumatism left the patients on the outbreak of the insanity and never returned. In one case the insanity did not appear until after the rheumatic attack had ceased. The conclusions arrived at were—1. That rheumatism induced not only an acute form of cerebral disturbance, but also a chronic form, lasting a month or more. 2. This disturbance is unattended by fever, and is marked by depression, often amounting to actual melancholia with stupor. Moreover, a state of excitement may follow upon this depression, or alternate with it. 3. Now and then this disturbance is accompanied by convulsive or choreitic movements. 4. The prognosis is much more favorable in the acute form ; the recovery would appear to be most speedy and certain when, after the mental derangement has lasted some time, the rheumatic attack is renewed.

It seems, from the cases observed, that the relation between the brain affection and the rheumatism is closer than that between chronic mental disorder and other acute diseases, as, for instance, typhus, where anaemia of the brain and other general conditions lie at the foundation of the mental state.

Dr. Sander narrates five cases confirmatory of Griesinger's opinions. In the two first the mental disorder appeared on the remission of the rheumatic affection which did not recur, and their termination was favourable. In both there was maniacal excitement at the onset, though depression followed afterwards. Serous effusion and hyperæmia of the membranes and of the subjacent cerebral matter may be presumed to exist, but at present has not been demonstrated by post mortem examination. In the other three cases, long-standing insanity preceded the rheumatic attack, but the sequel was recovery from the mental derangement.

'*Pathological and Physiological investigations relative to Dementia paralytica progressiva*' is the title of a long essay in the '*Zeitschrift*,' by Dr. W. Tigges, of Marsberg. Several French writers have attributed the disease to a diffuse chronic periencephalitis, but it is questionable how far the intimate changes in the capillary vessels and surrounding cortical tissue, as seen under the microscope, are referrible to true inflammatory action. On examining the brain of a paralytic patient, collections of more or fewer corpuscles are encountered, mostly with a clear outline, and either homogeneous and more or less granular. Some of them, indeed, are not distinguished from ganglion cells. These are better observed in the brains of those who have suffered exacerbations of their malady than of such as have con-

tinued in the same chronic state. But similar corpuscles and altered ganglion cells are met with in meningitis and in cancerous disease of the brain ; and the multiplication of granules in the ganglion cells indicates nothing more than more active nutrition proceeding in them. The same multiplication of granular cells is also found in the gray substance of the ventricles ; in one instance, it was met with in that of the spinal cord, and it occurs also in the epithelial cells of the arachnoid covering the pia mater and elsewhere. At the same time, the pathological basis of progressive paralytic dementia is not meningitis, but is rather to be looked for in the cortical lamina, in the changes in nutrition therein proceeding, both in the connective tissue and in the ganglion cells. It now and then happens that the ordinary symptoms of paralytic dementia are commingled with those of cerebral pressure ; in such cases the meninges play a more leading part ; serum is exuded and a hydrocephalic condition produced, with great hypertrophy of the connective tissue of the gray substance.

The starting point of the disease is either in a larger or smaller portion of the cortical lamina, or, more rarely in a general morbid process developed either within that lamina or external to it. In some instances, the paralytic affection is secondary to some form of mental disorder which has existed, it may be, for several years previously, but has not, it is presumable, wrought those changes heretofore in the gray matter to which the paralysis is attributable.

The author prefers the name "chronic diffuse periencephalitis" of French writers, to that given it by Rokitansky, viz., "Hyperæmia, with hypertrophy of the connective tissue of the gray lamina."

Among the further changes consequent upon the lesion is atrophy of the brain ; and prominent among the active agents in developing and extending the paralytic dementia, are those alterations in the capillaries and smaller vessels noted by Wedl and other observers. Amyloid degeneration of the small arteries is one of the most important of such alterations. It is especially seen on the visceral aspect of the pia mater, and on the contiguous surface of the gray lamina ; but, though always discoverable in the disease in question, it is not peculiar to it, but occurs in most cerebral maladies of a certain duration, whether accompanied by mental derangement or not. Its result is to destroy the contractility of the coats and to lessen the calibre of the affected arteries, consequently it eventually interferes materially with the proper nutrition of the brain.

The physiological section of Dr. Tigge's essay, though interesting, is mainly speculative.

"On the Physiological Basis of a Terminology of Mental Disorders," is the title of an essay by Dr. Otto Müller, of Helmstedt. It is prefaced by certain general remarks on the insufficiency and uncertainty

introduced into the study of insanity by considering and classifying its varieties, according to the manifold and ever varying psychical symptoms. All research goes to demonstrate that mental derangement is the consequence of disordered brain function, and a physiological classification of its forms appears, on that account, to be desirable. A purely somatic basis is impossible, for no distinct and constant group of psychical symptoms can be predicated as peculiar to any one cerebral lesion; nor does the present state of knowledge enable us to assign special psychical functions to particular segments of the brain. The healthy phenomena of mind require harmonious action among all the portions of the brain.

Yet though the positive lesions of the brain productive of mental disorder are not available as a basis of classification, the nature and manner of the disordered cerebral function appears to furnish one. For a similarity in the disorder of psychical life implies an analogy also in the process of deranged function. This psychopathology will take notice of similar facts and phenomena, as does neuropathology, and partakes, with it, of the advantages accruing from modern research in nerve physiology.

Three spheres of cerebral action are distinguishable:—1, the perceptive and imaginative, or "*psychosensual*"; 2, the emotional and sensitive, or the "*psychosensitive*"; and 3, the volitional, or the "*psychomotor*." Disorder may arise in either of these spheres. This happens in the case of the psychosensual sphere more frequently in the male than in the female sex; whereas, in the psychosensitive sphere, the reverse obtains.

Considerable variations in functional activity are within the boundaries of health, and, when such pass to excess, the conclusion is, that they are then associated with changes in the vitality of the nerve tissue. And just as diseases of nerves are neuroses, either of sensation or of motion, so may those of the brain matter be termed psycho-neuroses. So far as only psychical vitality is affected by the change, there is simple insanity, but when that change involves disturbance in contiguous, or in peripheral nervous parts, the psycho-neurosis is complicated.

The forms of central nerve disorder resemble those of peripheral, and may, in like manner, be distinguished according as they express—1, weakness of function (paresis, anæsthesia, asthenia); 2, irritation (hyperæsthesia); or, 3, paralysis. In this threefold division are included all functional disorders of nerve-elements, but their precise manifestation is necessarily determined by the specific properties of the nerve; for instance, irritation of a sensitive nerve produces pain, whilst that of a motor nerve causes spasm. So, again, paralysis implies loss of function, whether that of sensation or that of motion.

Lastly, weakness of function is connected with impeded flow or

altered quality of nutrient matter, with general or local arterial anaemia, irritation with primary or secondary hyperæmia, and paralysis attended with a destructive process operating on nervous tissue.

From the data above, the following terminology of mental disorders may be instituted.

1. *Neuroses of the psychosensual sphere :*

- a. Condition of debility (asthenia). Anæsthesia psychosensualis.
- b. Condition of irritation (monomania). Hyperæsthesia psychosensualis.
- c. Condition of paralysis (dementia after monomania). Paralysis psychosensualis.

2. *Neuroses of the psychosensitive sphere :*

- a. Condition of debility (melancholia tranquilla). Anæsthesia psychosensitiva.
- b. Condition of irritation (melancholia activa). Hyperæsthesia psychosensitiva.
- c. Condition of paralysis (dementia after melancholia). Paralysis psychosensitiva.

3. *Neuroses of the psychomotor sphere :*

- a. Condition of debility (stupor). Anæsthesia psychomotorica.
- b. Condition of irritation (mania). Hyperæsthesia psychomotorica.
- c. Condition of paralysis (dementia after mania). Paralysis psychomotorica.

*Insanity in Hanover.*—From the work of Dr. Gustav Brandes, ‘On Idiocy and Idiot Asylums in the Kingdom of Hanover,’ it appears that in that state there were, in 1861, 3084 lunatics and idiots in its population of 1,819,777 souls. The former were in the proportion of 1 to 590 inhabitants, the latter in that of 1 to 1445. The proportion of male idiots was larger, compared with the entire male population, than that of female idiots with the total female inhabitants. Moreover, idiocy prevailed much more in certain provinces than in others; for example, in that of Clausthal (in the Harz Mountains) there was 1 idiot in every 800 of the inhabitants, whilst, in another, there was only 1 in 1983.

The prevalence of insanity in connection with religious profession is shown in the following table:

|   |  |  |  |
|---|--|--|--|
| Among 1,196,443 Lutherans there were 973 lunatics, or 1 in 1528 |  |  |  |
| "    94,304 Reformed Church   "    64   "    or 1 in 1473       |  |  |  |
| "    216,144 Roman Catholics   "    189   "    or 1 in 1143     |  |  |  |
| "    11,452 Jews                  "    15   "    or 1 in 763    |  |  |  |

This same volume of the ‘Zeitschrift’ contains a notice of the contents of this Journal for three years, ending 1859. Considerable

space is devoted to the analysis of some of the papers that appeared in that interval, and the engravings representing plans of asylums are reproduced, with references in the German language. Of other papers a short notice is given, sufficient to indicate their purport. No critical examination is undertaken.

The twenty-first volume, for 1864, containing 704 pages, together with a supplement of 71 pages giving a "Report of the Meetings of German Psychologists at Frankfort and at Giessen," in 1864, is in our hands for analysis, but the space in this Journal usually allotted to this article on Foreign Psychological Medicine being already occupied by the foregoing abstracts, we are compelled to let it stand over to a future number.

## II.—*English Psychological Literature.*

1. *A Lecture on the Study of Diseases of the Nervous System.—Illustrations of Diseases of the Nervous System.—On Loss of Speech: its association with Valvular Disease of the Heart, and with Hemiplegia in the Right Side.* By Dr. HUGHLINGS JACKSON.  
(‘London Hospital Reports,’ vol. i, 1864.)
2. *Clinical Remarks on Cases of Defects of Expression (by Words, Writing, Signs, &c.) in Diseases of the Nervous System.*  
(‘Lancet,’ November 26th, 1864.)
3. *Two Lectures on Hemiplegia.* By Dr. HUGHLINGS JACKSON.  
(‘London Hospital Reports,’ vol. ii, 1865.)
4. *Observations on Defects of Sight in Diseases of the Nervous System.* By J. HUGHLINGS JACKSON, M.D.  
(‘Ophthalmic Hospital Reports,’ 1865.)

IN the first of these publications Dr. Jackson makes some forcible and excellent remarks on the value of a proper method of study, and lays stress on the necessity of combining the psychological history and the clinical history of disease, in order to get at its true natural history. He insists, in particular, on the study of the morbid changes that take place in the tissues:—“We should all study diseases of the eye if we wish to know diseases of the nervous system, and, indeed, pathology generally. Besides the importance of this knowledge, as a help to the study of the psychology of disease (for

six of the nine cranial nerves have to do directly or indirectly with the organ of vision), it is a field for the study of diseases of tissue. It is, I think, of quite as much importance as a practical knowledge of the chemistry of the urine. . . . Syphilitic choroiditis and syphilitic inflammation of the pia mater—the choroid of the brain—are pretty much alike as diseases of tissue, although they produce very unlike physiological symptoms, as the organs they damage and the functions disordered are very different. If I may use such expressions in physiology, the ‘idea’ is the same, but the ‘events’ are different. . . . I cannot too much impress on you that we ought, above all things, in brain disease, to study diseases of tissue.” But though insisting thus strongly on this necessity, and enforcing his remarks by striking and instructive illustrations, Dr. Jackson does not fall into the error of the caterpillar-like mortal who spends his life in minutely creeping over the surface of his so-called facts of observation—who, as Dr. Jackson puts it, “might have learnt many things, but would after all know little”—“might be very minute, but would never be precise”—“would attend to the superficial contiguity of events, and neglect the more real continuity of ideas.” “Such a man’s classifications and arrangements would have the merit of neatness, but he himself would have a most unmethodical mind. There would be a superficial appearance of order, but a real incoherence. I think this kind of order is the very worst form of slovenliness. For some of these eye symptoms are merely local signs of almost universal changes. Let us never forget that an elaborate arrangement is often the highly worked cloak that covers up inferiority of organization. The most gorgeous piece of mosaic is not equal to the simplest natural flower.” With these observations we heartily concur, and might supplement them by a well-known text, which, were time and space available, we should undertake to prove contained excellent instructions as to the true method of scientific work—“Behold the lilies of the field: they toil not, neither do they spin; and yet I say unto you that Solomon, in all his glory, was not arrayed like one of these.”

In his “Observations on Defects of Sight in Diseases of the Nervous System,” Dr. Jackson points out that amaurosis from disease of the central nervous system, even of *one* hemisphere, is invariably double, and describes the ophthalmoscopic appearances generally found in such amaurosis. So far from there being no abnormal changes in the eye, as sometimes said, he believes that there are often marked changes with a slight defect of sight—the changes being those of white atrophy of the optic disc. It may seem a strange statement to make, but it is true, that in acute cases of cerebral disease the amaurosis is often overlooked; at any rate, Dr. Jackson is quite sure, from his experience, that power to read ordinary type in such cases is no certain evidence that there is not fixed and permanent

damage to the optic nerve or retina. The sight, again, sometimes fails periodically, or suddenly and entirely, while the ophthalmoscopic appearances remain nearly the same. "The record of an acute case of cerebral disease must be considered to be imperfect if the eyes have not been examined with the ophthalmoscope. . . . If I hear, or read, of a case of tumour of the brain in which the patient had gradually become stupid and inattentive, and, perhaps towards the end, comatose, I attach little value to the negative statement that the patient's sight had been unaffected, unless the ophthalmoscope had been used. . . . We may find signs in the eye of great value before the patient complains much of his sight. . . . I by no means wish to imply that 'dimness of sight with a headache is a serious thing,' but that it is always imperative to view this series of symptoms most carefully, and especially if the pain be severe or unusual, and, above all, if attended by urgent, purposeless vomiting." Dr. Jackson relates in detail several interesting cases of cerebral disease which have come under his observation, and which appear fully to bear out what he has said; and, as an incidental conclusion, states that "from the three severe symptoms—headache, vomiting, and amaurosis—we cannot fix the seat of the disease causing them, at least not with any exactness."

We are sorry that we have not now room to quote some of the interesting cases reported by Dr. Jackson in his "*Illustrations of Diseases of the Nervous System*," which will form a valuable mine for reference to those who are engaged in the study of nervous diseases; we proceed, however, to notice the results of his observations on the association of loss of speech with hemiplegia of the right side. He brings forward as many as thirty-four cases of hemiplegia, in all of which loss of speech, in greater or less degree, was present; in thirty-one cases the hemiplegia was on the right side; in three only was it on the left. It is known that M. Broca believes that loss of language is produced by disease of the left side of the brain only, and that he has endeavoured to locate the so-called faculty of articulate language in the posterior part of the third left frontal convolution—the "*convolution of articulate language*." Quite independently, however, of M. Broca, Dr. Jackson had noticed that in nearly all the cases of loss of speech which he had seen there had been hemiplegia of the right side, and had thought much about the strange coincidence, without committing himself to any hasty theory. "Of course, hemiplegia is not a necessary accompaniment of loss of speech. These two symptoms frequently occur together, simply because the part of the hemisphere in which is the seat of the faculty of language, or of articulate language, is near the upper part of the motor tract, the corpus striatum; so that, from mere relation of contiguity, they often suffer together. What damages one of these parts is very likely, at the same time, to damage the other, or

afterwards to extend to it; or, as I suppose happens in cases of embolism, because both these branches are supplied by branches from one arterial trunk—the middle cerebral—so that when the vessel is plugged both lose their supply of blood at the same time." But why, it will naturally be asked, may there not be a loss of speech when there is injury to the right corpus striatum and contiguous parts, and the hemiplegia is on the left side? Dr. Jackson's reply is that, as a matter of observation, we very rarely find it clinically; and while he can give a multitude of cases of right hemiplegia with loss of speech, he can give many cases of left hemiplegia in which there was no loss of speech. "There can be no question that, *at present*, the evidence points most strongly to the conclusion that the faculty of expression resides in the left and not in the right hemisphere; for it must be remarked that there is a great amount of negative evidence that damage of the brain in the neighbourhood of the *right* corpus striatum does not produce loss of speech, in any sense of the word." But then, it will be further asked, "has it ever happened that any one has observed an instance of left hemiplegia with loss of speech?" Because, if so, the foregoing conclusion meets with a terrible facer. Certainly there are a few such cases on record. How, then, are these to be got rid of? For our part we have not yet met with an argument which would take the sting out of them, which might not equally well be used to take the force out of all the observations and arguments in favour of the third left frontal convolution being the seat of articulate language. Moreover, we must confess to an insuperable difficulty in conceiving that language, not in the mode of its expression, but in its intellectual character as the sign or symbol of the idea, should have so limited a seat as the posterior part of the third left frontal convolution. We think that such a notion never could have entered into the head of any one but a Frenchman; and we are very glad to find that Dr. Jackson expressly guards himself from warranting the philosophy of it. All he does—which he may very legitimately do—is to direct attention to the very common association of loss of speech with right hemiplegia—in other words, with disease of the left hemisphere—to indicate how far this is confirmatory of M. Broca's theory, and to pause for the true scientific explanation, whatever that may be.

This brief notice must not be held to convey anything like an adequate idea of the range, precision, and value of Dr. Jackson's studies of nervous disease; his publications contain much exact and practical information, and must themselves be referred to by all who wish for the latest and best information on the subjects of which they treat.

1. *On the Efficacy of the Bromide of Potassium in Epilepsy and certain Psychical Affections.* By S. W. DUCKWORTH WILLIAMS, M.D., &c. (John Churchill and Sons, New Burlington Street. Pamphlet.)
  2. *The Actions of the Bromide of Potassium upon the Nervous System.* By J. CRICHTON BROWN, M.D. Edin.
- (‘Edinburgh Medical Journal,’ June, 1865.)

In the ‘Journal of Mental Science’ for January 1865, we gave, in this Quarterly Report, an abstract of several papers on the use of bromide of potassium in the treatment of mental disease.\* Dr. S. W. D. Williams and Dr. Crichton Browne continue these investigations.

Dr. WILLIAMS, in his pamphlet, considers the whole subject of the administration of the bromide of potassium under the following heads :

Firstly. He gives a brief description of his experiments with the bromide in epilepsy.

Secondly. He collects the results of these experiments into a series of tables, with remarks on each table.

Thirdly. He details the results of the trial of the medicine in psychical cases, not epileptic ; and

Fourthly. He endeavours to describe the rationale of the action of the medicine.

Regarding the efficacy of the bromide of potassium in psychical cases, not epileptic, Dr. Williams has found it to be of use chiefly in two classes.

1. It is decidedly beneficial in those cases of insanity in which a monomania, existing for some time, has at last gained such a hold on the intellect that the affective faculties also to a certain extent become deranged, for where a monomania exists, and gradually in-

\* 1. “Observations on the Treatment of certain forms of Epilepsy by Bromide of Potassium.” By Robert M'Donnell, M.D., Surgeon to Jervis Street Hospital. (‘Dublin Quarterly Journal of Medical Science,’ February, 1849.) 2. “On the Action of the Bromide of Potassium.” By S. W. D. Williams, M.D., L.R.C.P. Lond., House-Surgeon, General Lunatic Asylum, Northampton. (‘Medical Times and Gazette,’ July 23, 1864.) 3. “Epilepsy, and the Administration of Bromide of Potassium.” By G. Goddard Rogers, M.D., Physician to the West London Hospital. (‘Lancet,’ December 10, 1864.)—‘Journal of Mental Science,’ January, 1865.

See also Dr. T. B. Belgrave’s *Clinical Cases*, “On the use of the Bromides of Potassium, Cadmium, and Ammonium, in the Treatment of Insanity.” (‘Journal of Mental Science,’ October, 1865.)

creases in intensity as time elapses, it at last comes to exercise such control over the intellect that those faculties which excite or give rise to emotions become also secondarily affected, and at last to such a degree that the patient is no longer a true monomaniac.

2. The second class are those cases of extreme nervous irritability, described by Mr. Henry Behrend in the '*Lancet*,'\* whose malady chiefly manifests itself by an utter incapacity to calm their nervousness and dread caused by some morbid idea, sufficiently to allow them to sleep. They pass night after night in restlessness and agony, and, unless some favorable change is induced, gradually relapse into a state of helpless fatuity.

The following are the conclusions drawn by Dr. Williams in this pamphlet:

"1. That the bromide of potassium possesses the power of moderating the frequency of epileptic paroxysms.

"2. That the power is confined to fits occurring during the daytime.

"3. That its virtue is due to its sedative influence on the heart's action.

"4. That it also ameliorates the violence of the paroxysmal phenomena, and that the power is due to a like cause.

"5. That it may be used with advantage in many cases of insanity, and especially in those in which the emotions are affected.

"6. That it has no special antaphrodisiac properties.

"7. That in most persons as much as half a drachm may be given at a time, but that on some constitutions a much smaller quantity has a very deleterious effect.

"8. That doses of from twenty to thirty grains given at night to patients suffering from extreme nervous irritability will often induce sleep when opiates are hurtful.

"9. That in some cases it produces hypercatharsis, and that patients with such idiosyncrasies do not easily adapt themselves to its use.

"And, finally, I must own, after twenty months' careful study and close examination of this much-vaunted medicine, that we have not yet found a specific for epilepsy. I cannot say that I am disappointed or much surprised; for, as I already have remarked, I instituted my experiments having a wholesome scepticism as to their success. That they have produced even moderate benefit is, therefore, all the more encouraging; for I am sure I in no way overestimate it when I say that our wards containing epileptics have not been like the same places since the medicine has been used; and this has been the constant remark of the nurses, attendants, and more rational of the patients, and the visiting justices. If, therefore, these pages induce others in charge of hospitals for the insane to

\* See also '*Journal of Mental Science*,' July, 1864, for an abstract of Mr. Behrend's paper.

give the bromide of potassium a trial, and if the same benefit arises from its use as did in the Northampton Asylum any trouble I may have taken will indeed be amply rewarded."

DR. CRICTON BROWNE has contributed a paper to the *Edinburgh Medical Journal* on the actions of the bromide of potassium upon the nervous system. According to Dr. Browne's observations, the actions of this drug on the nervous system may be thus classified :

1. *It mitigates those convulsive movements or spasmodyc twitchings which are the result of the rapid conversion of sensory impressions into motor impulses, or of morbid reflex action through the medulla oblongata, and it exercises a peculiar influence over the phenomena which are characteristic of epilepsy.*—The two kinds of action of the bromide of potassium which are distinguished in this section—its action upon exalted reflex activity and upon epilepsy—are coupled together, because the first may be not improperly included under the second. Involuntary muscular contractions of a clonic description, the final indications of the increased reflex excitability of the medulla oblongata, when they have sudden loss of consciousness associated with them, amount to epileptic convulsions. The two conditions differ more in degree than in kind. The irritation to which both of them are due may be more intense in the latter than in the former, or may have a wider distribution and more extended dominion ; but however this may be, the initial change to which they must both be traced is demonstrated by physiological clinical, and pathological observations, and by direct experiment to be resident in the medulla oblongata and upper part of the spinal axis. Purely dynamic in its earliest stages, it eventuates at length in enlargement of the capillaries, disorganization of their walls, and fatty degeneration of the nervous tissues.

Now, whether the increased excitability of the medulla oblongata is so great as to be productive of epilepsy, or so slight as to expend itself in minor spasmodyc complaints, the bromide of potassium seems to exert an excellent effect upon it.

2. *It has a sedative effect upon the action of the heart in certain cases.*—The heart is obviously placed in connection with the medulla oblongata by the fibres which it derives from the sympathetic and from the pneumogastric nerves. Their functional relations (says Dr. C. Browne) are demonstrated by the phenomena of shock, of compression or injury of the brain, of joy, grief, and mental emotions, of dyspepsia, and other bodily diseases. Weber's experiments tended to prove that the stimuli conveyed by the pneumogastric retard its action, and that those conveyed by the sympathetic accelerate it ; but Lister has shown that while "gentle irritation of the vagus increases the heart's action," a stronger application has the opposite effect. Whatever may be the influence of the degree of the irritation,

I feel persuaded that this condition of the medulla oblongata does occasionally increase the force and frequency of the cardiac contractions. The palpitations of hysteria, the primary effects of the inhalation of chloroform, and the unnatural frequency and fulness of the interparoxysmal pulse in epilepsy, may be referred to as illustrations of this. It is to its power over this irritation, situated in the medulla oblongata, that I have attributed the calmative effect which I have undoubtedly seen the bromide of potassium exercise upon an excited heart.

3. *It lessens and mitigates that rapid and preternatural excitement of spasm, tremor, and other outward manifestations, which in some forms of nervous disease follow upon any emotional or moral disturbance.*—In patients thus affected, liable to unreasonable outbursts of passionate action, and effusions of sentiment, Dr. C. Browne has several times seen the calmative effects of the bromide of potassium. It has seemed to place a check upon the passage of mental into motorial activity, or in some way to assist volition, in softening down any disparity between the outer life and the inner existence. He relates the case of one young woman (H. L—), labouring under peculiar sexual delusions, and believing that her body was permeated by the poison of syphilis; there was at the time of commencing the use of the drug that proneness to inexplicable agitation which has just been sketched. She took unaccountable antipathies to certain persons around her, and deported herself in their presence in such a manner as could only be supposed to indicate deep-rooted and murderous aversion. Her face was distorted by anger, now flushed, now pale, her breathing hurried and irregular, her heart's action was tumultuous, her frame trembled, her articulation was impeded; yet in her calmer moments she explained that her enmity towards them was by no means so deadly as her conduct would lead one to believe. She disliked them, without any assignable cause. When she thought about them she felt restless and uncomfortable, and when she saw them she lost all self-command. The existence of excitement of the medulla oblongata was shown by the occurrence of violent twitchings of the muscles of the face and upper extremities on the application of a sinapisum to the chest and throat. After she had taken the bromide for some days there was a remission in the severity of her symptoms. She felt better able to bear the presence of the obnoxious persons without exhibitions of fury, her deportment became more tranquil and reserved, her speech more cool and collected. She begged for the continuance of the medicine when its omission was spoken of, declaring that it kept her temper within bounds, and that she should "certainly fly off" if it were withheld. In another case of impulsive insanity (E. B—), Dr. C. Browne has seen singular benefit accrue from the same remedy.

4. *It acts as an anodyne, under certain circumstances relieving*

*hyperæsthetical sensations.*—That the bromide of potassium does possess anodyne properties Dr. C. Browne feels assured, though its exercise of them has, in his experience, been arbitrary and uncertain.

5. *It promotes sleep.*—This action of the drug seems to have been discovered by Dr. Brown-Séquard. It has been announced by Dr. Garrod, and further set forth by Mr. Henry Behrend; and the statements of these gentlemen has been amply verified by Dr. C. Browne's experience.

6. *It exercises a sedative influence over the sexual functions.*—The lowering action of the bromide of potassium upon the sexual functions has been a matter of observation for some time. Many years ago, a German physician intimated that he had known it to produce temporary impotence. Sir Charles Locock found it useful in epilepsy connected with sexual excitement, and many physicians have found it serviceable in the treatment of nymphomania, and have thus satisfied themselves of its anaphrodisiac action.

7. *It exercises a beneficial influence over certain mental diseases.*—Without minutely considering here the uses of the bromide of potassium in the treatment of insanity, it may be mentioned that Dr. C. Browne has seen it of signal service in orectic and thymic derangements. He believes he has seen it moderate excessive manifestations of the instincts and appetites, and afford assistance in subjugating degraded and vicious impulses and propensities. He has certainly seen it efficacious in alleviating melancholia, simple, suicidal, akinetic, hypochondriacal, sexual, emotional, &c. It is in these forms of insanity enumerated that he anticipates that it will be of most utility.

1. *The Personal Responsibility of the Insane.* By JAMES F. DUNCAN, M.D., T.C.D. Dublin, 1865, pp. 98.

2. *On the Definition of Insanity considered Medico-legally.* By JAMES RORIE, M.D. Edin.

(‘Edinburgh Medical Journal,’ July, 1865.)

3. *Acquitted on the Ground of Insanity, from a “Mad Doctor’s” point of View.*

(‘The Cornhill Magazine,’ October, 1865.)

DR. DUNCAN states his well-written publication to be intended rather as a popular essay than a regular scientific treatise. “The subject (he writes) is one of great and admitted difficulty, more especially when it comes to be a matter of practical application, and although the writer, in common with others who have traversed the same path, may have failed to make that simple which is essentially

obscure, yet he thinks something will have been gained if he has succeeded in making the public acquainted with the true difficulties of the question, and in indicating the course which alone can lead to their solution. Hitherto it has been treated very much in a one-sided aspect, and the views presented to the public have been, consequently, partial and imperfect. The moralist, the jurist, and the psychologist have each looked at it exclusively from their own peculiar stand-point, a course of proceeding which has given rise to controversies and contradictions."

The conclusions which Dr. Duncan draws from a careful consideration of the entire subject are briefly summarised in the following propositions :

"I. Persons labouring under ordinary mania, where there is incoherence, excitement, and the general symptoms of complete mental estrangement, are thereby rendered entirely irresponsible for whatever criminal actions they may commit in that state.

"II. Persons labouring under the various forms of partial insanity are irresponsible for the criminal actions they may commit, which are plainly traceable to that condition, even though such actions may not admit of justification, on the hypothesis of the causes which provoked them being real instead of imaginary.

"III. Where criminal acts are committed by persons partially insane, although no connection may be traceable between those actions and their insanity, their condition must be looked upon as a ground of mitigation of punishment, and treated accordingly.

"IV. Where persons convicted of crimes are exculpated, either wholly or partially, on the ground of insanity, their condition requires them to be transmitted to a proper hospital or asylum for their immediate medical treatment.

"V. That, subject to proper precautions, as soon as such patients are restored to health, reason and humanity require that they should be set at liberty, unless there should appear to be special risk of a relapse.

"VI. That where unoffending persons have suffered personal injury from the violence of insane persons, reasonable compensation should be made to them out of the lunatic's estate.

"VII. That coroners' juries should not be expected or required to append to their finding in cases of suicide the usual formula, 'when labouring under temporary insanity,' unless some urgent necessity arise to require the person's state of mind to be carefully investigated, and the fact of such condition existing has been clearly established.

"VIII. That unless in clear cases of positive mental derangement some modified form of the obsolete mode of unchristian sepulchre should be maintained as a means of checking the too prevalent tendency to suicide."

DR. RORIE, in his paper in the "Edinburgh Medical Journal," views the question of the criminal responsibility of the insane, both in its legal and medical relations. His remarks on the relative legal relations of the insane before the English and Scotch law respectively are of interest, and worthy of quotation here :

" If we turn now to the laws of Scotland we shall find that by them criminal irresponsibility is to a great extent based on similar principles ; but in the Scotch law there do not appear to exist those minute definitions which we have seen exist in the laws of England. Thus, Alison, in his 'Principles of the Criminal Law of Scotland,' states that 'if insanity be of that complete and perfect kind which entirely overpowers the reason and takes away from the pannel the power of distinguishing right from wrong, or knowing what he is doing, it forms a complete bar to any criminal prosecution.' But he adds, 'several nice and delicate questions arise as to the degree of insanity which in law have this effect.'

" " To amount to a complete bar to punishment, the insanity, either at the time of committing the crime or of the trial, must have been of such a kind as entirely deprived him of the use of reason, as applied to the act in question, and the knowledge that he was doing wrong in committing it ;' and he adds, ' if the pannel, though somewhat deranged, is yet able to distinguish right from wrong in his own case, and to know he was doing wrong in the act which he committed, he is liable to the full punishment of his criminal acts.'

" But it is also stated that, ' if it appear from the evidence that the pannel, though partially deranged, was not so much so as to relieve him entirely from punishment, the proper course is to find him guilty ; but on account of the period of infirmity of mind which he could not control, to recommend him to the royal mercy.' \*

" In the case, however, of the trial of Alexander Milne,† in Edinburgh, for the murder of James Paterson, in February, 1863, where the plea of insanity was found not proven, and which has always appeared to me a singular miscarriage of justice, evidence is afforded that the strict view given above has, to a certain, though small, extent, been relaxed, for the Lord Justice-Clerk, in charging the jury, stated that ' the doctrine of criminal responsibility is exceedingly simple. If a person knows what he is doing—that is, if he knows the act he is committing—if he knows the true nature and quality of the act, and if he apprehends also its effects, he is responsible ; but if he is in such a state that he does not know the act or its true nature and quality, or the effects which may follow from it, he is not responsible, provided he is in that condition

\* 'Alison's Principles of the Criminal Law of Scotland,' 1832.

† This case was fully reported by Dr. Yellowlees in the 'Journal of Mental Science' for April, 1863.

through mental disease. If,' continued his lordship, 'you are quite satisfied that the prisoner was under insane delusion at the time of the act, you need not inquire whether he knew right and wrong. If the delusion be once established, the law will presume from that, that he did not know right from wrong. But you must be quite satisfied that he was under an insane delusion. It is not sufficient to say that a man is in an anomalous state, from whatever cause—in a state that makes the bad part of his nature get the better of him—a state, so to speak, of moral depravity. Weakness of mind, combined with moral depravity, does not make a man insane. There is no greater mistake. But if the mind is diseased, the man is insane ; and if the mind is diseased, it is no matter what has caused it, if so be that the insanity is actually produced and present at the time.'\* . . . .

"From evidence admitted in a still more recent case, it would appear that further relaxation of the strictness of the Scotch law may be hoped for, and in a direction of the utmost consequence to a class now almost unquestionably recognised by the medical profession as insane, but for whom no legal protection at present exists, namely, impulsive and moral lunatics. I here refer to the admission, with the concurrence of the Court, of evidence regarding the mental state of the prisoner's maternal relatives as bearing on the question of the prisoner's sanity, in the case of J. S. Love, tried before Lord Ardmillan on 22nd September, 1864. Although in this case there was an extraordinary difference of medical opinion, which led to the medical evidence being virtually thrown aside altogether, there was no want of direct evidence to show that at the time of the deed the prisoner was so insane as to render him irresponsible ; but the indirect, though strong, collateral evidence was also admitted, that his mother had been insane, and in an asylum, and that her brother had four idiot children. Now, the universal admission of such evidence would be of the greatest assistance in proving that moral and impulsive lunatics should be regarded legally as irresponsible, as the very essence of moral insanity appears to me to consist in the fact that their inability to act in accordance with the laws of their country is, in reality, a mental defect acquired by hereditary transmission."

The writer in the 'Cornhill'—said to be Dr. Blandford—has produced an article which cannot fail, through the large circulation of the 'Cornhill,' to exercise an influence for good on the public judgment in cases of lunacy. In treating of the several forms of insanity, of which homicide is the chief or a frequent symptom, the writer divides his subject into—

\* 'Edinburgh Medical Journal,' March, 1863.

" I.—Cases in which there is an ascertainable loss or aberration of intellect.

" II.—Cases in which the intellect is apparently unaffected."

Of the latter section he has the following sound observations :

" In the second division are to be placed several classes of homicidal insanity, in which no intellectual deficiency or aberration is discoverable, and these are the great difficulties for the bench, the bar, and the jury. These are the cases which have caused the greatest outcry, where it has been said that mad doctors have set up what they have termed *moral* or *impulsive insanity* as a mere excuse, and where the whole trial has been looked upon as a farce. The phrase *moral insanity* in no way conveys a true or adequate idea of these mental states. In the majority of them there is a disease of some nerve-centre, recognisable by those who study such diseases, though they will hardly convince a jury of it. Many of them are analogous to certain bodily diseases, also connected with nerve-centres.

" 1. First, we may mention one where the bodily and mental disease seem as it were to meet, where not infrequently the one takes the place of the other. This is epileptic insanity. Cases are on record of furious homicidal attacks, which followed close upon an attack of epilepsy. Others are related where the epilepsy ceased, and in place of it a disturbance of mental cerebral action arose, so that instead of an epileptic fit a sudden fit of homicidal insanity manifested itself. These are cases where, by cerebral disorder, phenomena are produced which are closely allied to the convulsive action of epilepsy, and during which volition, and the consciousness of right and wrong, and of the character of the act, are for the time suspended.

" 2. Take another class of cases somewhat akin to the foregoing. Often in women, and occasionally in men, we meet with a short transient attack of violent mania, which has been called *hysterical* or *transitory* mania. If, as not infrequently happens, a person commits homicide in one of these short paroxysmal attacks, few would be able a week afterwards to find enough insanity in him, from mere personal examination, to deliver him from responsibility when tried before a jury. When the paroxysm has passed off, such persons are often unaware of what has happened. On the other hand, they sometimes feel its approach, and beg to be restrained ; nay, will even tie themselves, that they may commit no violence.

" 3. We find a number of people whose whole insanity is a homicidal impulse ; who feel it, not occasionally, but constantly ; and who will put it in practice whenever opportunity offers. It is a chronic desire to kill. Many thought Macnaughten ought to have been hanged, because he showed purpose and design ; but these men will lay their plans for weeks and months. Witness the man who

hid his knife under the floor, as related in the *Times'* article on the Broadmoor Asylum. Most asylum officers can point to cases of this sort; to patients who show no other insanity, but are known to have made homicidal attack after attack, and who have probably inherited the disease. In fact, this last class is generally hereditary.

"4. Arising also from hereditary taint, homicidal insanity sometimes shows itself in quite young children—children of seven and eight years of age. These paroxysmal attacks of violence are valuable lessons in mental disease. They ought to teach us much which will assist us in the appreciation of disordered brain action as we find it in adults. They ought to teach us, and teach juries, that we must look to facts, and not to our own fancied and subjective consciousness of right and wrong.\*

"These, then, are the conditions of a crime on which evidence has to be given before a jury. Was the prisoner's *volition*, his power of abstaining from the act, in a sound or a diseased state when he committed it? Secondly, had he at the same time an adequate knowledge of the character of his act? Did he, in plain words, know what he was about? On these, which are both questions of mental science, evidence must be given which will enable the jury to form an opinion on the responsibility of the accused, which is the issue for them."

*Idiot Asylums*; the 'Edinburgh Review,' July, 1865.—This article, on *Idiot Asylums*, in the 'Edinburgh,' is of interest, as showing that the public are beginning to take up the question, already so admirably and successfully solved by Dr. Langdon Downe at the Idiot Asylum at Redhill,† of the educational treatment of the idiot. In our review of the last Report of the Commissioners in Lunacy ('Journal of Mental Science,' October, 1865, p. 577) we quoted a passage showing the importance the Commissioners attach to the provision of suitable asylums for the treatment of the idiot paupers who now are either retained in the

\* See an article by Dr. Maudsley on "Homicidal Insanity," in No. 47 of the 'Journal of Mental Science,' October, 1863.

† Without a careful personal inspection of the Asylum at Earlswood, it would be difficult for any one who knew the idiot children only as they are in the wards of the County Lunatic Asylums to realise what the system of educational treatment, there so skilfully elaborated by Dr. Langdon Downe, can accomplish. Nothing can be more painful than the sight of these unfortunate children, listless and unoccupied, in the wards of a lunatic asylum; nothing, I think, can afford more gratification to any one interested in the advancement of civilisation than a visit to the idiot children at Earlswood. There is no similar institution—similar, I mean, in its successful treatment of the idiot—in any part of the continent of Europe. When the movement now begun by the Commissioners in Lunacy to provide proper treatment for the idiot paupers throughout England comes to be carried out, Dr. Downe's work at Earlswood will assuredly be the standard for us to copy from.—C. L. R.

union houses or, if found very troublesome or dirty, are sent to encumber the wards of the County Lunatic Asylum.

The writer of this article in the 'Edinburgh,' in giving an historical introduction to his subject, falls into the error of accepting the stories of the late Dr. Guggenbühl's successes and work at the Abendberg. As a matter of fact, his undertaking was a miserable failure, not to say imposture.\*

In this article in the 'Edinburgh,' which is of considerable general interest, the whole subject of the treatment of idiocy is passed in review. Our limits compel us to omit several passages we had marked for quotation. The whole article is deserving of perusal.

\* See 'Journal of Mental Science,' April, 1864. "Stray Notes on Foreign Asylums," by Dr. W. C. Mackintosh.

## PART IV.—NOTES AND NEWS.

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### *Sewage Irrigation at the Cumberland Asylum.\**

THIS is an exhaustive clinical report of a severe visitation of dysentery at the Cumberland Asylum, and which Dr. Clouston proves beyond a question, to have been connected with the effluvia from a field over which the undiluted sewage of the asylum had been allowed to run "by open cuts over three acres of grass land. The direction of the cuts was often changed, to make the sewage run on different parts of the field, but this was not done very scientifically." The analysis of the symptoms, and the gradual tracing of them to the morbid influence of the sewage exhalations, are very ably recorded.

The whole of the facts related by Dr. Clouston, and the inferences from these facts, are thus briefly summed up :—

1. An epidemic of dysentery of a very fatal character occurred in the Cumberland and Westmorland Asylum, in the years 1864-65.
2. All the positive evidence that can usually be produced to determine the cause of any disease, can be produced to connect this epidemic of dysentery with exhalations from a field irrigated by sewage, as effect and cause. Ample negative evidence can be produced to show that no other probable cause of such an epidemic was in operation.
3. The old, weak, paralysed, and diseased patients were chiefly attacked, but it was not confined to them.
4. The majority of the patients attacked were inmates of the wards on the ground floor of the asylum, showing that the sewage effluvia is most concentrated near the ground. Little or no wind and a high barometrical pressure would seem to be the most favorable conditions for the injurious effects of the poison to manifest themselves.
5. It would seem to be unsafe to apply sewage in any form (*undiluted and not very scientifically irrigated*) to land with a stiff clay subsoil, within 350 yards of human habitations.
6. Diarrhoea in its ordinary form may also be caused by sewage exhalations.
7. There are strong reasons for believing that the sewage effluvia which caused dysentery and diarrhoea in some persons may have caused typhoid fever in others.
8. The sewage poison had a period of incubation in most cases before the dysentery appeared. The length of this period was probably from three to five days.

\* 'Sewage Exhalations the Cause of Dysentery.' An Account of an Outbreak of Dysentery in the Cumberland and Westmorland Asylum, which was caused by the Effluvia from a Field irrigated by Sewage. By T. S. Clouston, M.D. Edin., Medical Superintendent. (A reprint from the 'Medical Times and Gazette,' June, 1865.)

9. The dysentery was of a very fatal character, and the ipecacuanha treatment, so successful in tropical dysentery, was not so in this epidemic.

10. The two morbid appearances most characteristic of this epidemic were, 1st, a soft membranous deposit on the mucous membrane of the intestines; and 2nd, the diseased condition of the lower part of the small as well as the large intestine in all the cases.

11. The poison which caused the dysentery seemed to occupy an intermediate position between the poison which causes the continued fevers, and that which produces ague and its concomitants."

It is a valuable and warning lesson which, Dr. Clouston here records, of the poisonous influences on the human system of sewage exhalations.

It is scarcely fair, however, to confound with *Sewage Irrigation*, properly so called, Dr. Clouston's fatal experiment.

Such irrigation must in the first place be done in a scientific manner, and next, the sewage must be amply diluted, otherwise, besides causing Dr. Clouston's form of dysentery, it will kill the grasses, whose growth it is proposed to stimulate. In the standard of all sewage experiments, the meadows at Craigintinny, near Edinburgh, which have now been so successfully irrigated for eighteen years as to raise the rental from 20s. an acre to £30, at Croydon, and at Carlisle, the sewage used for irrigation is largely diluted with the waste and surface water used in these towns. At the Cumberland Asylum, on the contrary, "the water from the baths and lavatories is not thrown into the sewage drains, it having been thought that the sewage would be too much diluted if mixed with it. The main drain conveys the sewage to a large vaulted close tank, 40 feet by 40 feet, and 6 feet 6 inches in height, situated about 150 yards from the nearest inhabited part of the asylum,—a small detached block—and 200 yards from the main building."

Thus, instead of a running stream of fresh sewage, amply diluted, Dr. Clouston in his experiment used stagnant, undiluted sewage, necessarily charged with foul gases. Further, no disinfectants appear to have been used at the Cumberland Asylum. The result was, that in little more than a year thirty-one persons were attacked by dysentery, of whom twenty died.

There are several county asylums where the whole of the sewage has for several years been applied to the land by surface irrigation, without any such ill effects as Dr. Clouston here records. In all such instances, the following precautions have been adopted:

1. The land has been thoroughly drained, so as to allow the sewage water to filter through and escape.

2. The sewage has been scientifically applied, *i. e.*, care has been taken that the channels were level, and the flow constant.

3. The sewage has been regularly deodorized by lime, carbolic acid, sulphate or chloride of iron, &c.

4. The sewage has been applied fresh, and not after being stored in a large tank, and after decomposition has taken place.

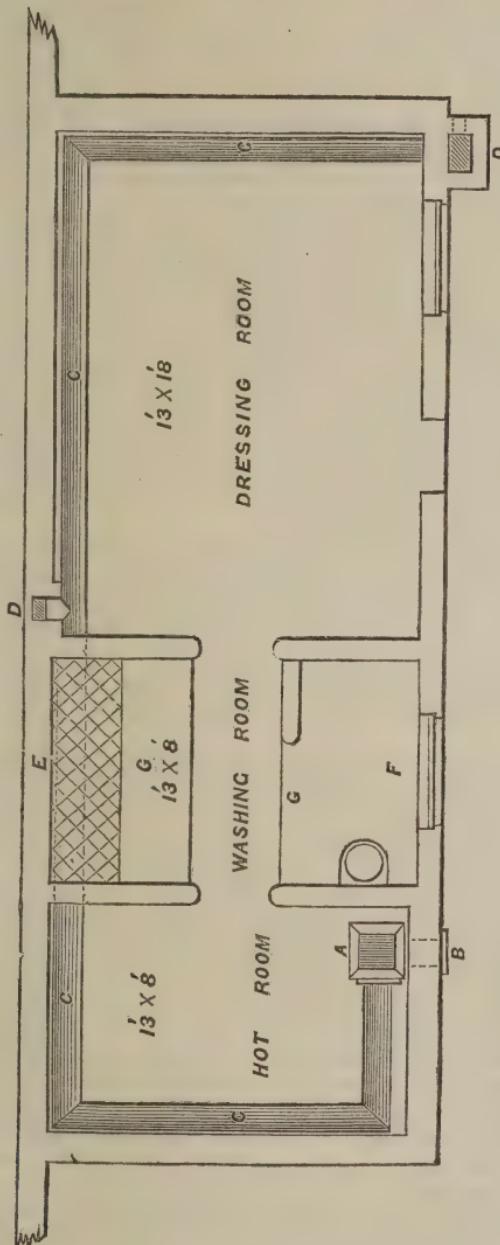
#### *Opening of the Roman Bath at Colney Hatch (Middlesex Asylum), with Plans and Estimates for Radiating Chambers in Hospitals, Private Dwellings, &c.*

THE Manager of the Hammam having been present at the opening of the bath at the Middlesex Asylum, thus describes the event:

"Last week, on Wednesday, the bath at Colney Hatch was started. I

enclose a plain sketch of it, and have asked Mr. Wood to make a more elaborate one. The heat is entirely radiating, and though they had only a blanket at the door the temperature was 190°. I went on the invitation of

## PLAN OF BATH AT COLNEY HATCH LUNATIC ASYLUM.



Scale  $\frac{1}{2}$  in. = 1 foot.

A.—STOVES.

B.—DOORS FOR STOVES AND ASHES.

C.—IRON FLUE.

D.—CHIMNEYS.

E.—SHAMPOOING SLAB, RAISED,

F.—WASH-BASIN AND DOUCH.

G.—SUNK FLOOR.

Dr. Sheppard. He was very sanguine, and at once brought in a patient to try the effect. It was a case of melancholia—a young intelligent man he seemed, had lost a child, and could not be brought to believe in its death,

but fancied it had been stolen. Dr. Sheppard said it was a very bad case, as he could not get any sleep. Had not had more than three hours' sleep in four days and nights. Was in the bath nearly an hour, sweated very well, epidermis peeled off in a most extraordinary manner. He was very comfortable all through the bath, and afterwards while cooling, and, despite the conversation going on between four or five persons present as to the bath itself, fell off into a sound sleep. Dr. Sheppard woke him, and he said he felt very comfortable. He went to bed at eight and slept soundly until six next morning, when he took exercise—a new man. Dr. Sheppard says it was a bad case, but now he will be right in about ten days. Mr. Pearson, the other medical gentleman present, will make notes of the case. Nothing could be better than this successful trial there."

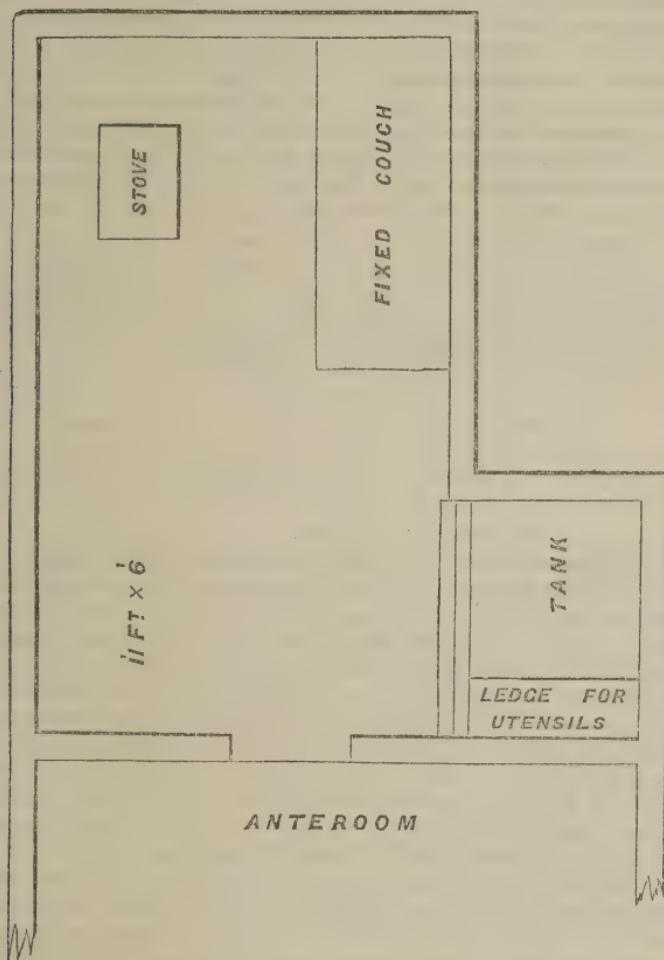
The bath at Colney Hatch has cost £180. It is to be hoped that the immediate success that has attended it may induce the governors of the asylum before long to sanction the original plan submitted to them by Mr. Urquhart, the heads of which were as follows:—

"I have been engaged in planning an adaptation of the bath to the purposes of your Institution. The bath, and that by radiating heat, must of course be there; but, in addition, you require a large available space for the daily washing of your patients, with abundant supply of hot and cold water, in a hall with an Indian temperature. The plan first submitted to you was based on an expenditure of £300. The present is for £500. For this you will have a structure which will become the model for the asylums, hospitals, unions, and barracks of the three kingdoms.

"The Hammam has cost for the building part £10,000; the area is 7000 square feet. I propose to give you a building, with an area of 1500 square feet, at a cost of £500, and will undertake to pay the difference in case of excess of expenditure. As you dispose of the patients' time, and can arrange relays from six in the morning till eight at night (and herein lies your facility), you can pass 700 patients through the operation of the bath daily. For mere washing you can pass them through it at the rate of 250 an hour."

The plan given of the actual Colney Hatch bath, though falling far short of what it ought to be for such an establishment, is still very well adapted for a private house; but as there may be many who would wish to build a bath in their own houses, but who would be unwilling to go to the expense of £180, a plan is given on the opposite page of a small bath erected at Worthing by Mr. Urquhart, the cost of which was only £37. Here is his description of it:—"There is a furnace, two couches, one raised, and receiving the close and full radiation of the red-hot metal, the other moveable on the floor; also a tank, to which you descend two steps, there being a slab to prevent splashing. You may have it in hot, tepid, or cold water, from pipes arranged so that the stream gushes out as from a rock. The water is heated simply by being in tanks close to the ceiling. The floor is in cement. There are no flues. From a common laundry stove, an iron pipe conveys the smoke across the room. There is no plate glass, but only a double sheet of crown glass let into the wall for a window. I use coke instead of coal, so as to keep the pipes clean, that the heat may be given off: no coal is used, even for lighting the fire. At a heat varying from 180° to 230°, night and morning, the fuel consumed will not amount to more than one-half of what is required for an ordinary fire. This closet has been constructed in the rudest fashion and at the lowest possible cost. I found that my bath at Riverside deterred rather than invited imitations, as people thought less of the advantage than the cost, and fancied that it required a thousand pounds to get a wash. This closet, with all the fittings for the supply of the water, hot and cold, and the building of three of the walls, has cost £37."

Supposing even £37 to be more than it is convenient to lay out, the writer may mention what he did himself when living in chambers in London. The only possibility of having a stove was to put it up in a room which was probably as little fitted for the purpose as any room in England: there was a thoroughfare through it, which it would have been most inconvenient to block up, and therefore anything like a reasonable length of flue was out of the question, and the stove had to be kept within thirty inches of the wall.



#### THE SWEATING CLOSET AT MONTAGU COTTAGE, WORTHING.

However, in spite of this, and in spite of the room having three doors and a window, which fitted so badly that sand-bags had to be put across them, the heat rose to 160°. This is how it was managed:—A laundress's stove was put opposite the fire-place: this was filled up with a sheet of iron, through which the stove-pipe passed. The draughts, from the reasons above mentioned, were so excessive, that it was found necessary to have a sort of wooden gridiron fixed over the stove about eight feet from the floor. On

this a piece of green baize was laid, and curtains of the same material ran along two sides of it and fell to the ground, thus enclosing the top and two sides of the stove. In this semi-e closure the heat used to vary from 150° to 160°, and was about 100° in the rest of the room. Now as to cost. The stove, including fixing it and filling up the front of the fire-place was 30s.; the wooden framework, 5s.; the green baize, 23s.; and the sand-bags, 3s.; total, £3 1s. This is to be looked upon solely as a makeshift, and not for one instant to be called, or considered, a "Turkish Bath." It is probable that in five rooms out of six the same outlay would produce far greater results; but, even under all the disadvantages mentioned, it was found to answer perfectly so far as this:—If one came home wet through and felt a cold coming on, an hour and a half was quite sufficient to raise enough heat to drive away one's enemy—no small advantage where colds are so common!

If any one who reads these lines should feel disposed to lay out even the smallest of the sums mentioned in putting up a stove for his own convenience, the writer would suggest to him, as the result of his own experience, which was bought by several failures and mistakes:

1st.—That for any *small* bath, there is *nothing* better than a common laundress's stove.

2nd.—That the heat from iron pipes is not injurious, in spite of what all the wise men say about it, if only there is provision made for an ample, but controllable supply of fresh air.

P. S.

### *Family Treatment in the North.*

A FEARFUL crime was committed yesterday forenoon at the Grange—a young man murdering his mother and sister, in broad daylight, in the public street, and almost under the eyes of the neighbours. The murderer is a man of thirty years of age, called John Hunter, who has been from boyhood weakly in body and erratic in mind, and whom for several years it had been thought prudent or found necessary closely to confine within his father's house, in Dalrymple Crescent. It is supposed that yesterday the young man attempted to leave the house, and was intercepted while so doing by his mother and sister; and that it was in anger at this interruption, and with the view of freeing himself from the confinement which he had, on the whole, borne very patiently, that he struck the fatal blows. He had armed himself, seemingly in his determination to liberate himself, with a piece of iron bar about eighteen inches long, and one inch in diameter; and with this, when his mother and sister had followed him through the garden before the house, to the pavement beyond, endeavouring to persuade him to return—he felled his hapless mother dead to the ground, and by repeated blows destroyed his sister, who had fallen prostrate over her mother's corpse. The appearance and demeanour of the prisoner (for Hudson was speedily and without difficulty taken into custody), as well as the statements of his family—which moves in a respectable circle—plainly indicate that when he committed the crime he was insane; and the sad tragedy gives a warning that should be taken good heed to, of the dangerous nature of the kindness by which persons in the unfortunate condition of the murderer, are permitted to live without proper surveillance and care.—*The Scotsman*, October 6th, 1865.

*Dr. John Webster, on the Site of Bethlehem Hospital.**To the Editor of 'The Lancet.'*

SIR,—When the question of removing Bethlehem Hospital was discussed in your columns, I strongly advocated that measure, which was also strenuously supported by the Commissioners in Lunacy, by the medical press, and approved by the profession generally. Among the arguments then used, I stated that throughout Europe foreign governments and other official bodies were busy transferring public lunatic asylums out of towns, where they had heretofore been usually placed, to more eligible sites in country districts, my assertions being based on observations made personally during various recent holiday tours on the continent, which extended from Northern Scandinavia to Southern Spain, and from Moscow to the British metropolis. Having, further, lately visited Scotland, I would now add, in support of my former statements, that a similar tendency to migrate countrywards pervades public administrative bodies in North Britain—nay, has existed for some time, as shown by several illustrations I formerly mentioned—viz., the Edinburgh Asylum erected at Morningside, that of Glasgow removed to Gart-Navel, and the ancient institution at Montrose now located on the slope of Sunnyside, whose name correctly describes its really fine situation.

Since the above examples were quoted during previous discussions, a new district asylum for Perthshire has been recently constructed at Murthly, about eleven miles north of the "fair city," and which rivals in respect of situation and other requisites many country mansions, or even noblemen's castles in the United Kingdom, as well for the splendid landscape afforded by the Grampians on the north, the fertile valley of Strathmore, through which the Tay largely meanders, and the Ochill Hills rising in the distant south, as far as far-famed Dunsinane, with Birnam Wood, whose foretold movement towards the former should portend Macbeth's defeat. In fact, finer scenery could scarcely be found in all Caledonia, than is now constantly presented to the gaze of Murthly residents, to say nothing of the lawns, gravelled walks, terraces, flower-beds, &c., within the precincts of this establishment, which comprises sixty acres at least.

Another illustration of the point mooted is supplied by the newly-opened Inverness District Asylum. This institution, which in many respects seems judiciously constructed, occupies the southern slope of a hill about three miles north of Inverness, from whence the building resembles some castellated or even regal residence, and accordingly constitutes a prominent object, which always attracts the notice of travellers visiting the admired scenery around. From a broad terrace in front of this asylum, as likewise through most of the windows of its wards, day-rooms, and dormitories, the varied and extensive views obtained over Strathness, the adjacent city, the hilly distant horizon opposite, with beautiful terraqueous vistas both east and west, are really magnificent. Indeed, the panorama here presented to the eyes of admiring spectators seems almost unrivalled.

But another feature which will soon characterise this establishment for the insane, merits special remark—namely, that the extent of land attached and the cottages scattered thereon, will ultimately permit a new development of appliances highly beneficial for treating mental affections. When the full complement of officers shall have been appointed, it is proposed that married attendants, with their families, shall reside in these dwellings, under whose

charge a certain number of patients will then be placed, and treated like ordinary members of such households, taking part also in the customary domestic arrangements. In short, the Gheel system will thus be put in operation, although at first on a limited scale. Nevertheless, agencies of that kind cannot but become, in many cases, powerful prophylactic aids towards promoting professional treatment, besides thereby usefully occupying the inmates. Much praise is, therefore, due both to Dr. Aitken, the able medical superintendent, for recommending, and to the Inverness District Board of Lunacy for sanctioning, so humane a proposition; while every philanthropist anxious to promote the well-being of demented persons, to whom "the free open-air treatment" is applicable, must wish it success.

Believing some of the remarks just made regarding lunatic asylum sites will not be deemed wholly uninteresting to those engaged in these discussions, and also considering that several of the facts narrated demonstrate conclusively that Scotland does not lag behind other European countries in reference to the novel point at issue, I shall feel obliged should the present cursory observations obtain a place in your valuable journal.

I am, Sir, your obedient servant,

JOHN WEBSTER, M.D., F.R.S.

Brook Street; Oct., 1865.

*The Lancet*, November 11th, 1865.

### *The Mackintosh Case—Testimonial to Drs. Smith and Lowe.*

OUR readers will recollect that a series of actions was brought by Mr. Mackintosh, of Holme, against those whom he charged with having been accessory to his illegal detention in a lunatic asylum. The last of these actions was brought against Drs. Smith and Lowe, the proprietors of Saughtonhall Asylum. There were peculiar hardships in the case of this action, for not only had Mr. Mackintosh been received as a patient in virtue of a regular warrant, but the action was not raised for a number of years after the alleged illegal detention had taken place. In the subsequent proceedings the defendants were successful; but even though they gained their cause, a very considerable expense was incurred. The medical profession of Edinburgh, desirous of testifying to Drs. Smith and Lowe the sympathy they entertained towards them, collected a sum of money to aid in defraying their expenses, which, a short time ago, was handed to Dr. Smith by Dr. Burt, President of the Royal College of Physicians. The subjoined correspondence will explain itself.

"Physicians' Hall, Edinburgh;  
" 17th November, 1865.

"**MY DEAR SIR,—**You cannot doubt that you and Dr. Lowe have had the wide-spread sympathy of the profession in your long and vexatious litigation with Mr. Mackintosh, of Holme, and that the termination of the case in your favour has given universal satisfaction.

"A few of your brethren have entertained a strong desire to lessen in some degree the pecuniary loss you have sustained, and with that view have contributed to the best of their ability, and it gives me great pleasure to be the medium of conveying to you the amount subscribed (£190 10s.), with their best wishes for your future happiness, and the prosperity of the ad-

mirable institution over which you and Dr. Lowe so ably and so skilfully preside.—Believe me, ever yours faithfully,

“ JOHN G. M. BURT.

“ Dr. John Smith.”

“ Saughtonhall ; 20th November, 1865.

“ SIR,—We shall esteem it a favour if you will insert the enclosed copy of letter in the next number of the ‘Edinburgh Medical Journal,’ and will at the same time allow us to express to our professional brethren the gratitude we feel for their handsome testimonial. Were we merely to acknowledge their very liberal subscription of the sum of £190, we should do so with feelings of the utmost gratitude; but even this sum, large as it is, sinks into insignificance in comparison with the pleasure we must ever feel at this general and unequivocal testimony on the part of those whose good opinion we highly prize. We accept it as an acknowledgment of their sense of the injustice by which we were made the defendants in a prosecution, which was not only most uncalled for in the first instance, but which was allowed to sleep for twelve years before it was submitted to a public trial. At the trial we had the satisfaction of being supported by the Scottish Courts of Justice, and eventually by the unanimous decision of the House of Lords.

“ Satisfactory as their decisions were, after a long and protracted trial, attended, we need hardly say, with great anxiety and expense, we have now to acknowledge a still higher satisfaction in this expression of the opinion of our professional brethren; and we beg most cordially to express the feelings of gratitude we must ever feel towards them for this unlooked for act of liberality and kindness.—We beg to remain, Sir, your very obedient servants,

“ JOHN SMITH,  
“ W.M. H. LOWE.”

*Edinburgh Medical Journal, December, 1865.*

*Mr. John Blake, M.P., on the Desirability of an Uniform System of Treatment in Asylums for the Insane.*

CONCEDING as I do, that all public asylums have, since 1792, made steady progress in the direction of a more successful and enlightened principle of treatment, and feeling convinced that the moral treatment of the insane by kindness, occupation, and amusement, is now firmly established, I would venture to ask, why is the principle carried so much further in some institutions than in others? and, again, would it not be possible to lay down some general code of rules and regulations for the guidance of all public and private asylums in the United Kingdom, and thus afford to their inmates the fullest advantages, limited only by local circumstances, of liberty, occupation, and amusement? In visiting public asylums at home and abroad, I have often been struck by the different principles which appear to guide the governing powers of almost neighbouring institutions. Thus, in England, the asylums of Leicester and York have absolutely no boundary walls—nothing beyond a quick-set hedge—while other English county asylums are protected by the old conventional high prison-like walls, and I may add that the official returns of these respective institutions show that the attempts at escape are less frequent in the unwalled than the walled asylums; and, what in a fiscal point of view, is of greater importance, the number of attendants

required is less. At Gheel, in Belgium, the lunatics are confined by no boundary limit whatever—there is no wall, no hedge, no line of demarcation between the mentally afflicted patient and the healthy colony in which he finds a refuge and a home. Indeed, in this admirable lunatic colony I witnessed the insane and the sane working side by side at their various avocations, and with this almost incredibly encouraging result, that whereas Gheel receives only such cases as are deemed incurable, it actually cures 18 per cent. of its, I was about to say inmates—it would be more appropriate to term them guests.—*The Moral Treatment of Insanity, and Suggestions for the Appointment of a Royal Commission to Report on the best System.* By JOHN A. BLAKE, M.P.

### *Publications Received, 1865.*

(Continued from the 'Journal of Mental Science,' October, 1865.)

'Clinical Lectures and Reports by the Medical and Surgical Staff of the London Hospital,' Vol. II, 1865. Churchill and Sons. See Part III, Quarterly Report on the Progress of Psychological Medicine.

'Time and Space: a Metaphysical Essay.' By SHADWORTH H. HODGSON. London: Longmans, Green, and Co., Paternoster Row, pp. 588.

*This Essay will be reviewed in our next number.*

'Bathing: How to do it, When to do it, and Where to do it.' By EDGAR SHEPPARD, M.D., Member of the Royal College of Physicians, Fellow of the Royal College of Surgeons, Medical Superintendent of the Male Department of Colney Hatch Lunatic Asylum. London: Robert Hardwicke, 192, Piccadilly, 1865 (pamphlet.)

(Reprinted from the 'Journal of Mental Science,' July, 1865.)

'A Guide to the Treatment of Diseases of the Skin: with Suggestions for their prevention, for the use of the Student and General Practitioner.' By THOMAS HUNT, F.R.C.S. Eighth edition. London, 1865.

'The Moral Treatment of Insanity, and Suggestions for the appointment of a Royal Commission to Report on the best System.' By JOHN BLAKE, M.P. Churchill and Sons, 1865 (pamphlet). See Part IV, Notes and News.

'Cholera Prospects. Compiled from Personal Observation in the East, for the Information and Guidance of Individuals and Governments.' By TILBURY FOX, M.D. Lond. Robert Hardwicke, Piccadilly, 1865 (pamphlet).

'Diarrhoea and Cholera; their origin, proximate cause, and cure, through the agency of the Nervous System, by means of Ice.' By JOHN CHAPMAN, M.D. Trübner and Co. 1865, pp. 46 (pamphlet).

'On the Brain of a Bushwoman; and on the Brains of two Idiots of European Descent.' By JOHN MARSHALL, F.R.S., Surgeon to University College Hospital.

*This admirable essay, reprinted from the Philosophical Transactions, will be fully reviewed in our next number.*

'On the Delirium of Acute Insanity during the decline of acute Diseases, especially the Delirium of Collapse.' By HERMANN WEBER, M.D., F.R.C.P., &c.

*A reprint of a valuable paper read before the Medico-Chirurgical Society, and printed in the Transactions of the Society.*

'Handbuch der Medicinischen Statistik.' Von DR. FR. OESTERLEN. Tübingen, 1865, pp. 968.

*Dr. Oesterlen is already well known in Germany for his careful compilations,*

resembling those of Dr. Carpenter in their finish and completeness, on Therapeutics, Hygiene and Medical Logic. The perusal of this present treatise on Medical Statistics might benefit those who entertain lingering doubts of the value of the application of the science of statistics to the art of medicine. It is most ably and carefully executed.

‘Seele und Leib in Wechselbeziehung zu einander sechs Vorträge von J. L. C. Schroeder van der Kolk.’ Braunschweig, 1865, pp. 192.

The literary executors of this distinguished psychologist are not consulting his reputation in these unfinished essays which they are publishing. We formerly expressed our regret at the appearance (after his death) of a fragmentary treatise on the pathology and therapeutics of mental disease. The present essay is even more unworthy of the author’s great name.

1. ‘Dictionnaire encyclopédique des Sciences Médicales,’ publié sous la direction de MM. les docteurs Roige-Delorme et A. Dechambre. Paris, 1865.

2. ‘Nouveau Dictionnaire de Médecine et de Chirurgie pratiques.’ Directeur de la rédaction le docteur Jaccoud. Paris, 1865.

These two large Dictionaries of Medicine are now publishing simultaneously by the rival houses of Victor Masson and Baillière.

The third volume of the ‘Dictionnaire Encyclopédique,’ shortly to be issued, will contain an article on Asylums, from the pen of M. Parchappe, the Inspector-General of Asylums in France. We can hardly, we fear, anticipate much novelty or information in this promised article.

The ‘Nouveau Dictionnaire’ contains, in the third volume, an article on Asylums, ‘Asiles d’Aliénés,’ by M. Pain, Médecin adjoint de l’asile privé des aliénés de Clermont (Oise). The article is a fair representation of the present views on asylums held in France. Like most of his countrymen, M. Pain is entirely—to judge by his appended bibliography—ignorant of the German and English literature of his subject; ignorant and content, apparently, to be so.

‘Die Irrencolonien in Zusammenhang mit den ähnlichen Bestrebungen auf dem Gebeite der Armen und Waisenpflege und mit besonderer Rücksicht auf die Verhältnisse im Königreiche Hannover dargestellt.’ Von Dr. Med. Gustav Brandes. Hanover, 1865, pp. 160.

The original chapters in this essay refer to the colonisation of the poor and orphans; the little that relates to the Insane is simply a statement of the oft-repeated facts relating to Gheel, the Colony of FitzJames, &c.

‘Ueber Geistesstörungen und Irrenanstalten.’ Von Hugo Henne. St. Gallen, 1865, pp. 128.

This is merely a popular essay by an Assistant Physician to one of the Swiss asylums. The matter is unobjectionable.

‘Tetanus. Eine physiologische Studie.’ Von Dr. Johannes Ranke, Privat-docent in München. Leipzig, 1865, pp. 468.

A most carefully compiled treatise on the subject of Tetanus, based on the most recent physiological researches of the German School. We cannot too highly commend the ability and diligent labour expended by this promising physician on his subject. There is no similar treatise on Tetanus in the medical literature of Europe.

‘Traité des Maladies mentales Pathologie Therapeutique.’ Par W. Griesinger. Traduit de l’Allemand (2e édition) par le Dr. Doumic, Médecin de la Maison centrale de Poissy. Paris, 1865, pp. 592.

*This is an excellent translation of Prof. Griesinger's able treatise. We understand that a Russian translation is in the press. The work is also being translated into English for the New Sydenham Society.*

'*De la Melancholie.*' Par le Dr. E. du Vivier. Paris, 1864, pp. 250.

*This can hardly be termed a medical treatise, still less is it a philosophical one. The author's motto is misplaced, or rather the promise of it is unfulfilled—“oporiet adducere medicinam ad philosophiam, et philosophiam ad medicinum.”*

'*Introduction à l'étude de la Medicine experimentale.*' Par M. Claude Bernard. Paris, 1865, pp. 400.

*It is impossible to speak too highly of M. Claude Bernard's contributions to the science of physiological medicine.*

### *County Asylum Reports, 1864-5.*

(Concluded from the 'Journal of Mental Science,' October, 1865.)

The Committee appointed by the Medico-Physiological Association to report upon "ASYLUM STATISTICS" desire respectfully to call the attention of the Superintendents of the County Asylums to their First Report (with Tables) on "ASYLUM STATISTICS," presented at the last Annual Meeting of the Association, and published in the Journal of Mental Science for October, 1865, and to renew their urgent request that in the annual Reports for 1865 these few and simple tables be adopted, and so the first step be taken towards forming a definite standard for Comparative Asylum Statistics.

59. First Annual Report of the Inverness District Lunatic Asylum, May, 1865.
60. Report of the Royal Lunatic Asylum of Montrose, for 1865.
61. Annual Report of the Bombay Lunatic Asylum, at Colaba, for the year 1864, by Assistant Surgeon W. Niven, M.D., Superintendent of the Asylum, Bombay, 1865.
62. Report of the Sligo and Leitrim Hospital for the Insane, 1864.
63. Thirty-eighth Annual Report of the Directors of James Murray's Royal Asylum for Lunatics near Perth, June, 1865.
64. Twelfth Annual Report of the County and City of Worcester Pauper Lunatic Asylum, 1865.
65. Tavole statistiche triennali, 1862-3-4, del manicomio centrale maschile in S. Servolo di Venezia. Venezia, tipografia Armena di S. Lazzaro, 1865.

### *Appointments.*

"Office of Commissioners in Lunacy, 19, Whitehall Place, S.W.;  
"13th December, 1865.

"SIR,—I am directed to state that Mr. Spring Rice has resigned the office of Secretary to this Commission, and that Charles Palmer Phillips, Esq., Barrister-at-law, has been appointed Secretary in his place.

"I am, Sir,

"Your obedient servant,

"THOS. MARTIN (for the Secretary)."

Joseph Bayley, M.R.C.S. Eng., has been appointed Resident Medical Superintendent to the Northampton General Lunatic Asylum.

T. N. Brushfield, M.D. St. And., Medical Superintendent of the Cheshire Lunatic Asylum, has been elected to the office of Medical Superintendent of the Surrey Additional Lunatic Asylum, at Brookwood, near Woking.

J. T. Hingston, M.R.C.S.E., late Assistant Medical Officer North Riding of Yorkshire Lunatic Asylum, has been elected House Surgeon of the Northampton General Lunatic Asylum.

H. R. Ley, M.R.C.S.E., has been appointed Medical Superintendent of the Salop and Montgomery Counties' Lunatic Asylum.

Samuel Hyde Macpherson, M.R.C.S., has been appointed Resident Medical Superintendent of the Borough Lunatic Asylum, St. Augustine's, Norwich.

### *Obituary.*

At Church Stretton, Shropshire, Samuel Glover Bakewell, M.D. Edin., aged 55, on the 30th August.

At Bethlehem Hospital, William Helps, M.D. St. And., F.R.C.P. Edin., Resident Physician of the Hospital, aged 37, on the 7th November.

At Hardingstone, on the 17th December, Edin Wing, M.D. Lond., late Medical Superintendent of the General Lunatic Asylum, Northampton, aged 47.

### *Notice to Correspondents.*

English books for review, pamphlets, exchange journals, &c., to be sent either by book-post to Dr. Robertson, Hayward's Heath, Sussex; or to the care of the publishers of the Journal, Messrs. Churchill and Sons, New Burlington Street. French, German, and American publications may be forwarded to Dr. Robertson, by foreign book-post, or to Messrs. Williams and Norgate, Henrietta Street, Covent Garden, to the care of their German, French, and American agents, Mr. Hartmann, Leipzig; M. Borrari, 9, Rue de St. Pères, Paris; Messrs. Westermann and Co., Broadway, New York.

The copies of *The Journal of Mental Science* are regularly sent by Book-post to the ordinary Members of the Association, and to our Home and Foreign Correspondents, and we shall be glad to be informed of any irregularity in their receipt.

The following EXCHANGE JOURNALS have been regularly received since our last publication:

The *Annales Medico-Psychologiques*; the *Zeitschrift für Psychiatrie*; the *Correspondenz Blatt der deutschen Gesellschaft für Psychyatrie*; *Archiv für Psychiatrie*; the *Irren Freund*; *Journal de Médecine Mentale*; *Archivio Italiano per le Malattie Nervose e per le Alienazioni Mentali*; *Medicinische Ahrenlese*; *Medizinische Jahrbücher*; *Zeitschrift der K. K. Gesellschaft der Aerzte in Wien*;

the *Edinburgh Medical Journal*; the *American Journal of Insanity*; the *British and Foreign Medico-Chirurgical Review*; the *Dublin Quarterly Journal*; the *Medical Mirror*; the *Social Science Review*; the *Ophthalmic Review: a Quarterly Journal of Ophthalmic Surgery and Science*; the *British Medical Journal*; the *Medical Circular*; and the *Journal of the Society of Arts*.

*The Editors of the American Journal of Insanity*.—Letter of the 17th November received. In accordance with your wish, the one exchange copy will in future be sent by Book-post, which is apparently the more convenient on both sides. Most of the back numbers of the 'Journal of Mental Science' can be purchased of Messrs. Churchill, whose property they chiefly are. We have asked them to communicate with you.

*M. V. Ferrier, Paris*.—Letter of the 13th December received. M. Dumesnil's vulgar diatribe indicates, as you justly observe, how much his vanity is hurt by our exposure of the manner in which in the asylums of the *Seine Inferieure* the old Restraint System is still rigorously carried out.

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